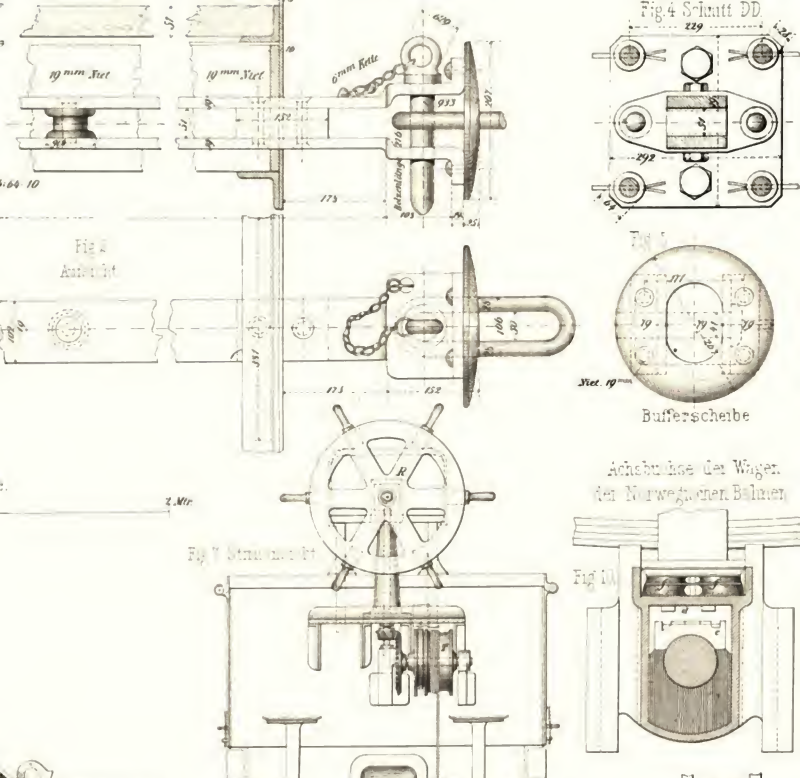

Handbuch für Specielle Eisenbahn-technik

Edmund Heusinger von Waldegg

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ATLAS

zu dem

Handbuch für specielle Eisenbahn-Technik

unter Mitwirkung von Fachgenossen

herausgegeben von

Edmund Heusinger von Waldegg,

Oberingenieur in Hannover und Redacteur des technischen Organs des Vereins deutscher Eisenbahn-Verwaltungen.

Fünfter Band.

Bau und Betrieb der Secundär- und Tertiärbahnen,

einschliesslich der schwebenden Draht- und Seilbahnen.

LXXXXIX Tafeln.

LEIPZIG,

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Fig. 1 u. 2. Pferdebahn-Wagen-Wende der Compagnie des Omnibus in Paris.
Fig. 3. Doppel-Curve (Paris).
Fig. 4. Situation der Pferdebahn-Gleisanlage am Oranienburger Thor in Berlin.
Fig. 5. Desgl. am Halle'schen Thor in Berlin.
Fig. 6. Desgl. am Rosenthaler Thor in Berlin.
Fig. 7. Gleis-Anlage zum Umdrehen der Pferdebahnwagen.

Drehscheibe und Schiebebühne für Pferdebahnwagen.

Taf. LII.
Fig 1—3. Schiebebühne (System Pöschmann).
Fig. 4 u. 5. Frictions-Achslager dazu.
Fig. 6 u. 7. Drehscheibe mit Grube.
Fig. 8. Drehscheibe ohne Grube.

Taf. LIII.
Fig. 1—10. Pferdebahn-Weiche im Gleise der alten Verbindungsbahn in Berlin.

Offener und geschlossener zweispänniger Pferdebahn-Wagen.

Taf. LIV.
Fig. 1—3. Zweispänniger offener Wagen.
Fig. 4—6. Zweispänniger geschlossener Wagen.
Fig. 7—11. Details der Achsbüchsen, der Deichsel, mit elastischem Zug etc.

Taf. LV.
Fig. 1—3. Geschlossener einspänniger Pferdebahnwagen, gebaut in Nivelles (Belgien).
Fig. 4—6. Offener zweispänniger Pferdebahnwagen, gebaut in Nivelles.
Fig. 7—9. Geschlossener zweispänniger Pferdebahnwagen, gebaut in Hernals.
Fig. 10—12. Geschlossener einspänniger Pferdebahnwagen, gebaut von Evrard in Brüssel.

Taf. LVI.
Fig. 1—4. Zweispänniger Pferdebahnwagen mit Decksitzen von John Stephenson in New-York.
Fig. 5—9. Pferdebahnwagen zum Ausweichen der Hamburger Wagenbau-Anstalt Rothenburgort.

Pferdebahnwagen, gebaut von John Stephenson in New-York.

Taf. LVII.
Fig. 1—4. Geschlossener zweispänniger Pferdebahnwagen.
Fig. 5 u. 6. Zweispänniger Pferdebahnwagen mit Laternenaufsatz.
Fig. 7—9. Einspänniger Pferdebahnwagen.
Fig. 10—15. Details der inneren Beschläge.

Details der Stephenson'schen Pferdebahnwagen.

Taf. LVIII.
Fig. 1 u. 2. Achsen und Räder.
Fig. 3—5. Achsbüchse für Zweispänner.
Fig. 6. Verschlussdeckel.
Fig. 7. Lagerfutter.
Fig. 8—11. Achshalter für Zweispänner.
Fig. 12. Gummibuffer mit Stahlspiralfeder.
Fig. 13. Gummibuffer für Ein- und Zweispänner.
Fig. 14. Dichtungsring für Zweispänner.
Fig. 15—17. Achsbüchse für Einspänner.
Fig. 18. Verschlussdeckel für Einspänner.
Fig. 19. Lagerfutter für Einspänner.
Fig. 20—24. Achshalter für Einspänner.
Fig. 25. Dichtungsring für Einspänner.
Fig. 26 u. 27. Feder für Achsbüchsen.

Taf. LIX.
Fig. 1—3. Zweitheilige Achse (System Rowan).
Fig. 4—8. Achshalter-Verbindungen für Ein- und Zweispänner.

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Fig. 9. Signalglocke.
Fig. 10. Wagenlampe.
Fig. 11. Scheergabel.
Fig. 12—14. Elastischer Zug.
Fig. 15. Laternenring.
Fig. 16. Thürrölle.
Fig. 17 u. 18. Schlosshaken und Thürgriff.
Fig. 19. Singnalglocke.
Fig. 20. Haken zum Laternenkasten.
Fig. 21. Thürklinke mit Platte.

Taf. LX. Fig. 1—4. Wiener Pferdebahn-Personenwagen.
Fig. 5—8. Geschlossener einspänniger Pferdebahnwagen gebaut in Mölling.
Fig. 9—12. Offener einspänniger Pferdebahnwagen gebaut in Mölling.
Fig. 13—16. Transportwagen für Kleinvieh.
Fig. 17—18. Deck-Wagenlaterne.

Pferdebahnwagen für Ausweich-Systeme.

Taf. LXI. Fig. 1—4. Kopenhagen System Keiffler gebaut von Eloff Jensen.
Fig. 5—8. Genf-Chêne System Howarth gebaut von Duerrlisen zu Grenoble.

Gleiskreuzungen mit Locomotivbahnen.

Taf. LXII. Fig. 1—4. Situation der Gleiskreuzung der Berliner Pferdebahn mit der Berlin-Stettiner-Bahn.
Fig. 5—7. Kreuzung der alten Verbindungsbahn mit der Charlottenburger Pferdebahn.
Fig. 8—11. Kreuzung einer Pferdebahn mit der Bergisch-Märkischen Bahn.

Taf. LXIII. Fig. 1—3. Lowry mit Eis- und Schneekratze System Vogel.
Fig. 4 u. 5. Salzwagen System Lestmann.
Fig. 6—9. Transportwagen für Pferdebahnwagen.
Fig. 10—14. Schneepflug.

Zahnstangenbahnen.

Taf. LXIV. Fig. 1 u. 2. Profile des Zahneisens und ⊐-Eisens zur Zahnstange in natürlicher Grösse.
Fig. 3—11. Construction der Zahnstange.
Fig. 12—14. Oberbau nebst Steinsatz der Vitznau-Rigibahn.

Taf. LXV. Fig. 1, 2 u. 5. Oberbau von Rorschach-Heiden.
Fig. 3, 4 u. 6. Oberbau von Wasseralfingen.
Fig. 7 u. 8. Einfahrt in Ostermundigen.
Fig. 9—13. Einfahrt in Wasseralfingen.

Taf. LXVI. Fig. 1—3. Schiebebühne in Freibergen.
Fig. 4—6. Zahnstangen-Weiche.

Taf. LXVII. Fig. 1—6. Locomotive der Vitznau-Rigibahn.
Fig. 7—9. Locomotive der Rorschach-Heiden-Bahn.

Taf. LXVIII. Fig. 1—5. Erste Locomotive Ostermundigen.
Fig. 6—8. Locomotive Wasseralfingen.

Ausgeführte Zahnradlocomotiven System Riggenbach.

Taf. LXIX. Fig. 1 u. 2. Zahnradlocomotive mit Handbetrieb in Laufen.
Fig. 3 u. 4. Graphische Darstellung der gezogenen Lasten.
Fig. 5. Vitznau-Rigibahn.
Fig. 6. Kahlenberg-Bahn.
Fig. 7. Schwabenberg-Bahn.
Fig. 8. Arth-Rigibahn.
Fig. 9. Rorschach-Heiden-Bahn.

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Taf. LI.

[illegible]-Rigibahn.
[illegible]-Heiden-Bahn.
[illegible]

[illegible] schiene System Fell.

Taf. [illegible]enis-Bahn.
[illegible] Locomotive der Mont-Cenisbahn.
[illegible] Locomotive der Canta-Gallobahn.

[illegible] der Uetliberg-Bahn.
[illegible]berg-Bahn.
[illegible] Superficial-Eisenbahn.

[illegible]wagen der Uetliberg-Bahn.
[illegible] mit Sperrstange.
[illegible] der Uetliberg-Bahn.

[illegible] Eisenbahn-System.
[illegible] der Seilbahn auf den Festungsberg bei Ofen.
[illegible] Personenwagen für dieselbe.
[illegible] der Betriebsmaschine am Fusse der Seilebene.
[illegible] Seiltrommel am oberen Theile der Rampe.
[illegible] apparat zur Befestigung des Seils.
[illegible] und Antifrictionslager.
[illegible] der Seilbahn auf den Leopoldsberg bei Wien.

[illegible] Seilbahn von Lyon nach Croix-Rousse. Untergestell des 1. Personenwagens.
[illegible] Seilbahn auf die Sophienalp (System Sigl).
[illegible] Personenwagen der Sigl'schen Seilbahn.

[illegible] Förderung aus dem Voreinschnitte des Žižkaberg-Tunnels.

[illegible]XXV. Fig. 1—3. Fördervorrichtung.
Fig. 4. Seilkuppellung.
Fig. 5. Drahtseilrolle.
Fig. 6. Moment der Ankunft.
Fig. 7 u. 8. Anlage der schiefen Ebene.
Fig. 9. Seiltrommel.
Fig. 10 u. 11. Rollwagen.

Thonförderung mittelst Kette ohne Ende.

[illegible] LXXVII. Fig. 1. Senkrechter Durchschnitt.
Fig. 2. Grundriss.
Fig. 3. Curve.
Fig. 4. Wendedocke zur Curve.
Fig. 5. Bessemer-Stahlschiene.
Fig. 6 u. 7. Leitrollen.
Fig. 8. Nothkettenglied.
Fig. 9 u. 10. Kettenscheibe.
Fig. 11. Förderwagen auf der schiefen Ebene.

Tertiärbahnen.

Taf. LXXVIII. Fig. 1—9. Oberbau und Wagen des Systems Lo-Presti.
Fig. 10—13. Wagen der Rothwaldbahn.
Fig. 14. Oberbau der Rothwaldbahn.

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Fig. 15—17. Oberbau der Forst- und Industriebahnen.
Fig. 18—20. Erhöhte Bahn und Förderwagen nach System Castel.
Fig. 21—23. Le Roy Stone's Einschienen-Bahn.

Taf. LXXIX. Fig. 1 u. 2. Locomotive von Larmanjat's Eisenbahnsystem.
Fig. 3—5. Personenwagen von Larmanjat's Eisenbahnsystem.
Fig. 6—9. Oberbau von Larmanjat's Eisenbahnsystem.
Fig. 10—12. Langschwellenbahn zu Idria mit Transportwagen.
Fig. 13—15. Holzbahn nebst Transportwagen auf der Herrschaft Racach in Krain.

Schmalspurige schwebende Eisenbahn.

Taf. LXXX. Fig. 1—7. Fell's schwebende Eisenbahn.
Fig. 8—11. Oberbau-Construction im Lager zu Alderschot.
Fig. 12—15. Salinenbahn zu Ischl.
Fig. 16—19. Salinenbahn zu Hall.
Fig. 20—24. Frachtenträger von Liarsky.

Taf. LXXXI. Fig. 1—6. Oberbau und Wagen des transportablen Moorgleises.
Fig. 7—19. Oberbau, Weichen, Kreuzungen, Drehscheiben und Wagen der transportablen Hülfsbahn (System Decauville).
Fig. 20—25. Oberbau und Wagen der schmalspurigen Feldbahn (System Corbin).
Fig. 26—30. Oberbau der schwebenden Forstbahn (System Heusinger von Waldegg).

Schwebende Draht- und Seilbahnen.

Taf. LXXXII. Fig. 1—12. Schwebende Bahn bei Minden.
Fig. 13—19. Drahtseilbahn von Dücker.

Hodgson's Drahtseilbahnen.

Taf. LXXXIII. Fig. 1 u. 2. Antrieb mit Horizontalrolle.
Fig. 3 u. 4. Antrieb mit Verticalrolle.
Fig. 5 u. 6. Verticale Doppel-Triebrolle.
Fig. 7 u. 8. Entladestation einer Bengalischen Seilbahn.

Taf. LXXXIV. Fig. 1—3. Gekreuzte Curvenführung.
Fig. 4 u. 5. Seildrücker mit endlosem Seil.
Fig. 6—10. Gummisättel.
Fig. 11. Einfache Curvenführung.
Fig. 12 u. 13. Seildrücker mit Druckrollen.
Fig. 14—16. Vorrichtung zum Ausgleich der Seilspannungen.
Fig. 15 u. 18. Tragpfosten.
Fig. 19—21. Kluppensattel von Hodgson.
Fig. 22—24. Tragrollen.

A. Bleichert's Drahtseilbahn.

Taf. LXXXV. Fig. 1—7. Kuppellungsapparat für Muffenkuppelung.
Fig. 8—13. Doppeltwirkende Bremsvorrichtung für die Wagen.
Fig. 14—18. Kuppelungsapparat mit Klemmexcenter.
Fig. 19 u. 20. Futteral zum Tragpfosten (Fig. 17 u. 18 Taf. LXXXIV.)
Fig. 21—24. Details.
Fig. 25 u. 26. A. Krämer's Antriebstation.

Taf. LXXXVI. Fig. 1 u. 2. Situation und Längenprofil der Drahtseilbahn der Gasanstalt in Hannover.
Fig. 3 u. 4. A. Bleichert's Förderwagen, Querprofil und Ansicht der Bahnlinie.
Fig. 5—7. Ausladevorrichtung der Drahtseilbahn zu Lebu.
Fig. 8 u. 9. A. Krämer's Endstation.
Fig. 10 u. 11. Seilkuppelung.

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Fig. 10. Oste[illegible]
Fig. 11. Ost[illegible] Müller.
Fig. 12. W[illegible] System Hodgson.
Fig. 13. R[illegible]

Taf. LXX. Fig. 1—3 [illegible]motiven.
Fig. 4—7 [illegible] metallurgique & charbonière belge à Tubize.
Fig. 8 [illegible]

Taf. LXXI. Fig. [illegible]
Fig. [illegible]
Fig. [illegible]

Taf. LXXII. Fig. [illegible] Trains.
[illegible] Baldwin.
[illegible] in Berlin.

Taf. LXXIII [illegible] und Sohn in Cassel, resp. Merryweather [illegible] Mygind.

[illegible] in New-York.

Taf. LXX[illegible] Längenansicht, Querschnitte etc. der älteren Anordnung.
[illegible] Desgleichen von der neuern Anordnung.

[illegible] von New-Bowery.
[illegible] der Third-Avenue.
[illegible] Projecte der New-York Elevated-Railroad, von der White-[illegible] bei Franklin Square.

Taf [illegible] Eisenbahnen.

[illegible] Station Mansion House der Metropolitan-District-Eisenbahn.
[illegible] Station Farringdonstreet und Aldergatestreet.
[illegible] Station Kings Cross.
[illegible] Station Moorgatestreet.
[illegible] Längenprofil der Metropolitan-Railway.
[illegible] Längenprofil der Metropolitan- und St. Johns Wood-Railway.
[illegible] Querprofile der Metropolitan- und East-London-Eisenbahn.
[illegible] Querprofile der unterirdischen Städtebahn in New-York.
Fig. 1 u. 2. Locomotive der Metropolitan-Bahn in London.
Fig. 3 u. 4. Continuirliche Bremse von Clark und Wilkin.
Fig. 5. Smith's Vacuum-Bremse.
Fig. 6. Schiene der Metropolitan-Bahn.
Fig. 7 u. 8. Weichen der Metropolitan-Bahn.

[illegible] Plan von New-York mit den Pferdebahnlinien, gewöhnlichen Locomotivbahnen, unterirdischen Bahnen und erhöhten Strassenbahnen.

Untergrund-Eisenbahn in New-York.

[illegible] Fig. 1 u. 2. Skizze der Station bei der 86. Strasse.
Fig. 3 u. 4. Skizze der Stationen zwischen der 58. und 59. und bei der 72. Strasse.

[illegible] Fig. 1 u. 2. Skizze der Station bei der 110. Strasse.
Fig. 3 u. 4. Skizze der Station zwischen der 125. und 126. Strasse.
Fig. 5. Situation der 4. Avenue.
Fig. 6. Längenprofil der Untergrund-Bahn in New-York.

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Fig 1.

Normal-Profil

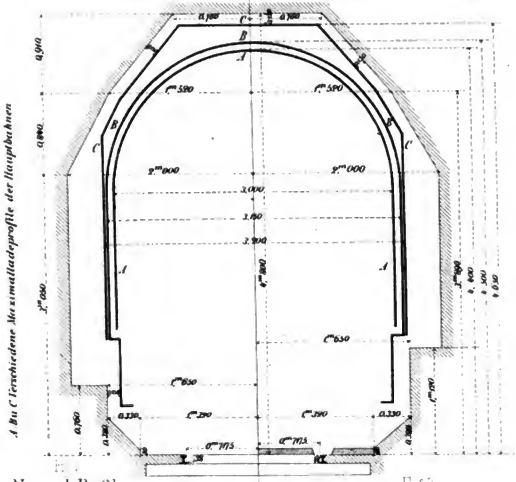


Fig 5.

Normal-Profil

des lichten Raumes u Maximal-Ladeprofil abc
für schmalspurige Bahnen von 0m75 Spur.

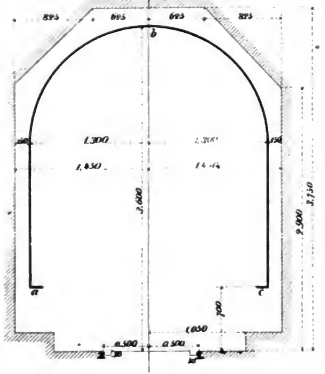
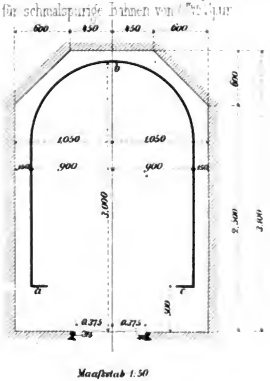


Fig 6.

Normal-Profil

des lichten Raumes u Maximal-Ladeprofil abc
für schmalspurige Bahnen von 0m75 Spur



Maassstab 1:50

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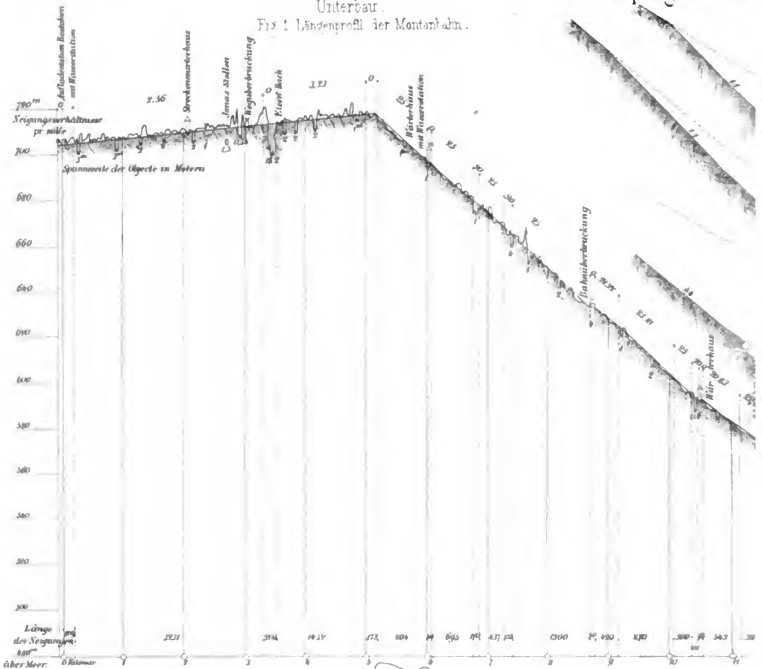
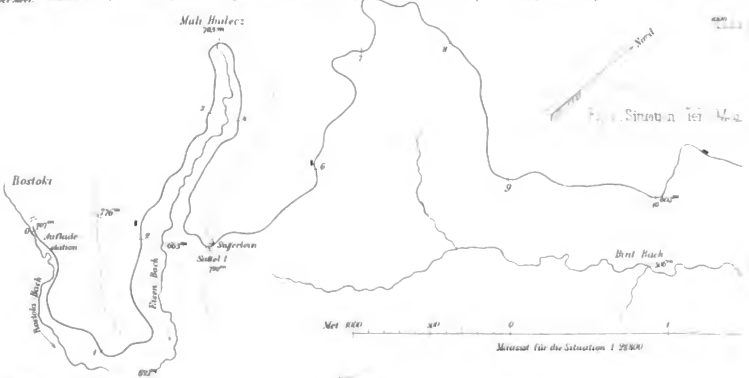
Schmalspurige Montan

Unterbau.

Fig. 1. Längenprofil der Montanbahn.





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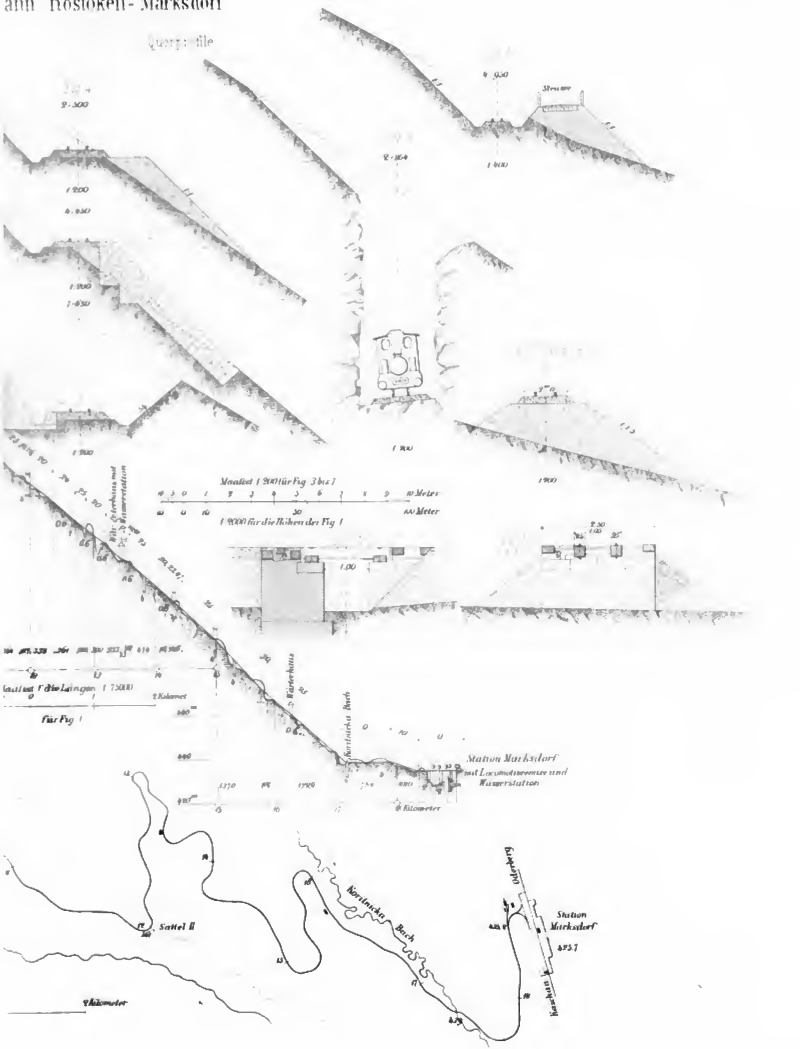
ahn Rostoken-Marksdorf



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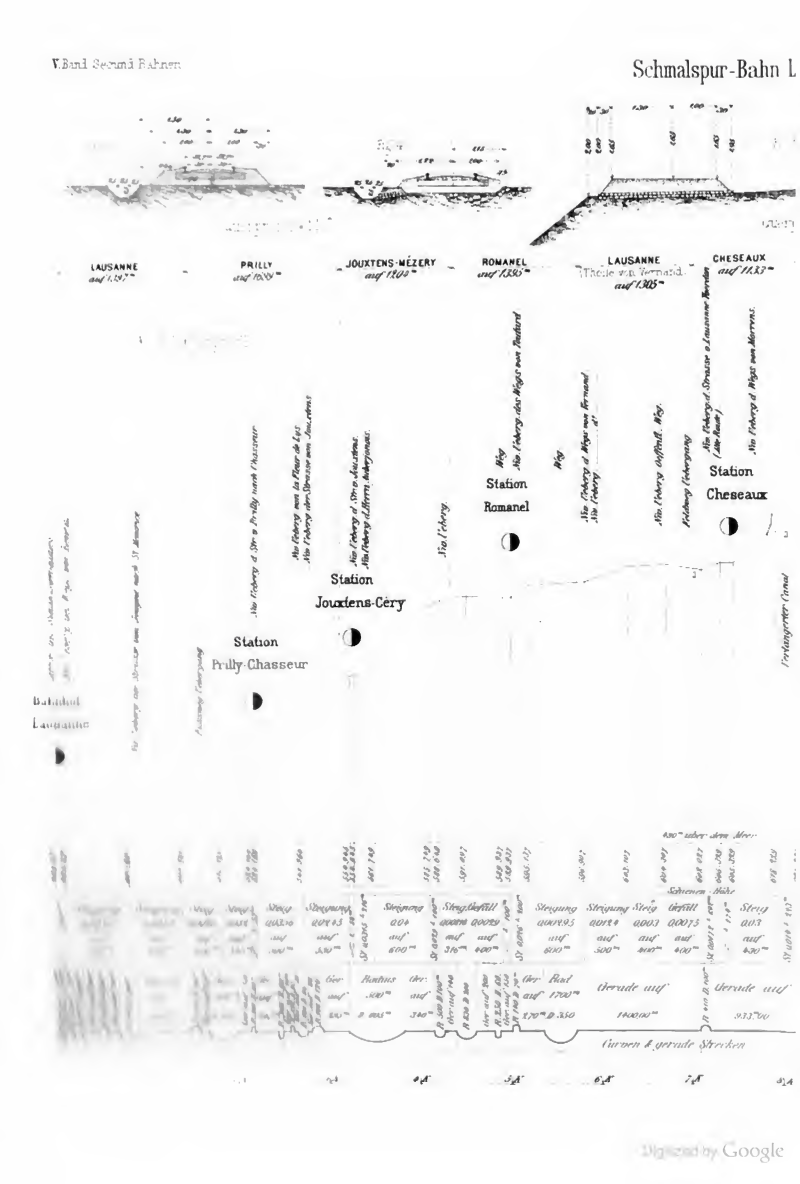

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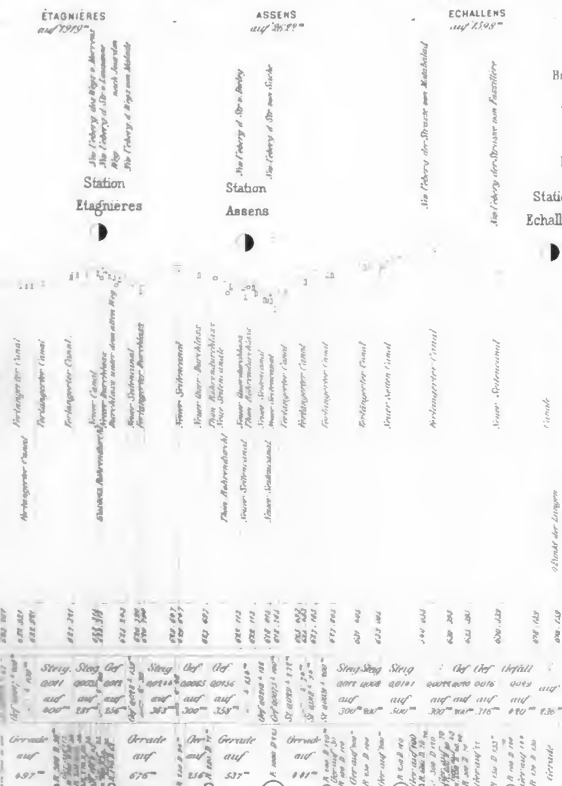

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Querprofile normalspuriger Se

Fig. 1 Neumünster-Tonning

(Fig. 2, 3, 4, 5 & 6) Nebenlinien

Fig. 2
In Auffüllung

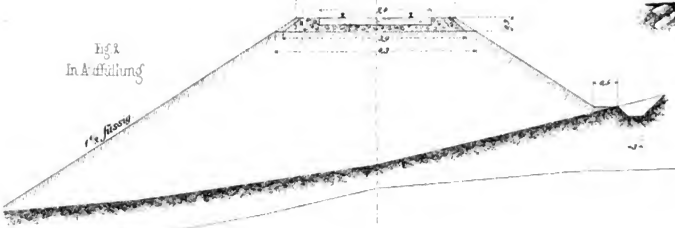


Fig. 4
In gewöhnlicher Erde

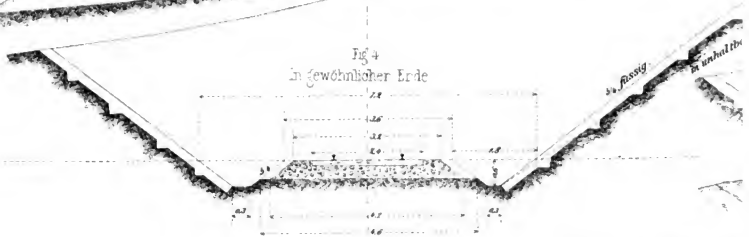
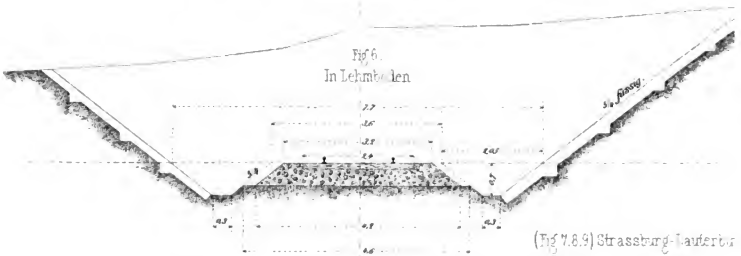


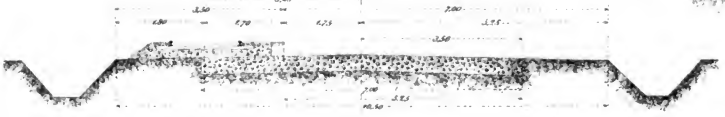
Fig. 6.
In Lehmboden



(Fig. 7, 8, 9) Strassburg-Lauterbo

Projecte zur Seite der
Chaussé.

Fig. 1



Maassstab 1/10.

Lith. Anst. v. F. Wirtz, Darmstadt.

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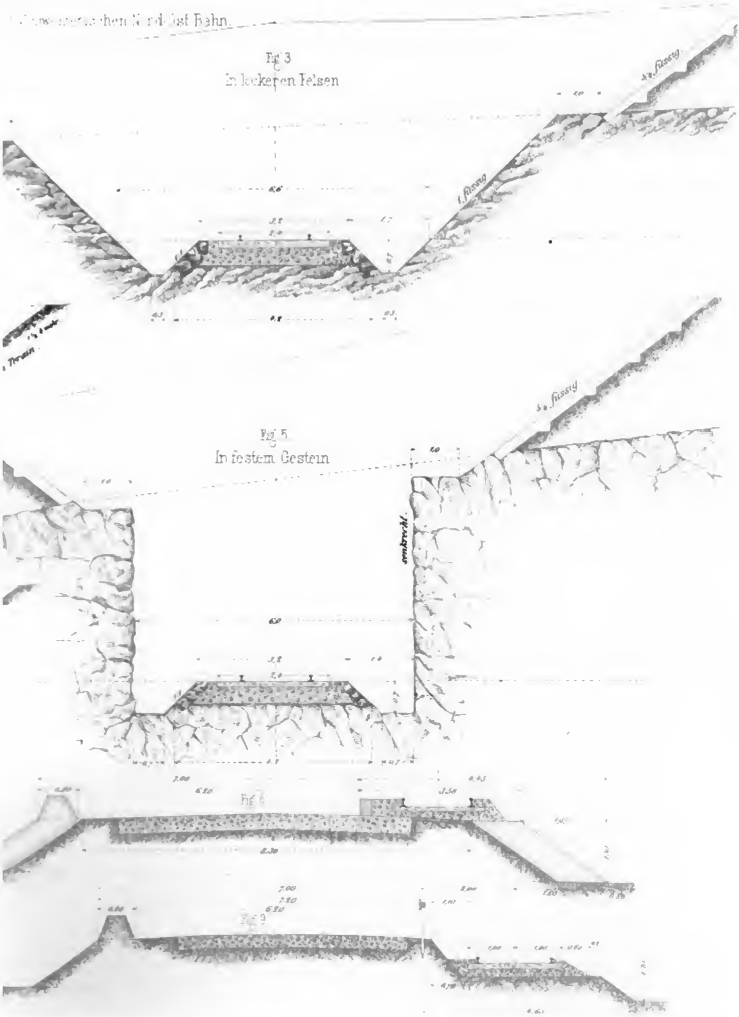
und. Bahnen in verschiedenen Bodenarten.

Taf. IV.



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Querprofile sch
in ver

Fig 2 Tunnelprofil

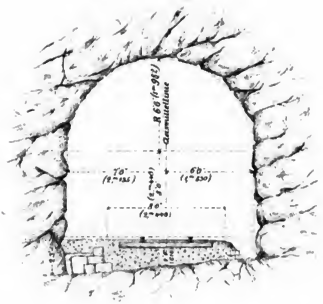


Fig 1 Brühlthal Bahn

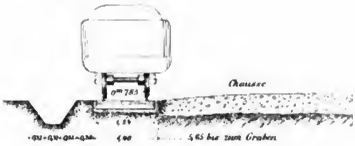


Fig 4
Dammprofil auf
in der Ebene

Fig 5
Dammprofil mit
Stützmauern

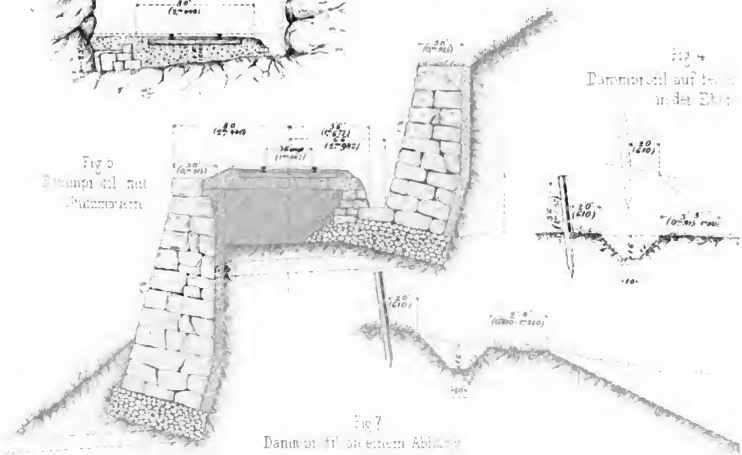
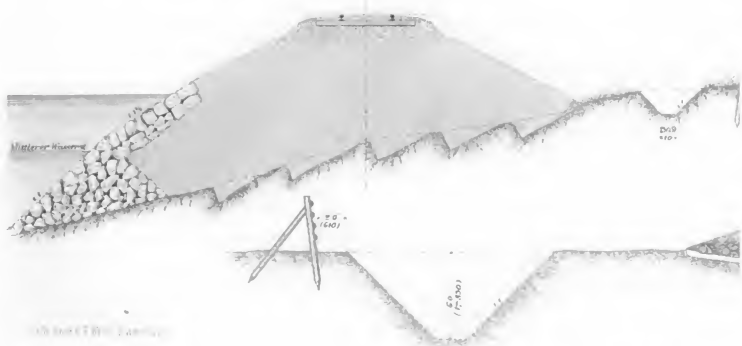


Fig 7
Dammprofil an einem Abhang
mit trockener Futtermauer



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ialspuriger Secundarbahnen
hiedenen Bodenarten

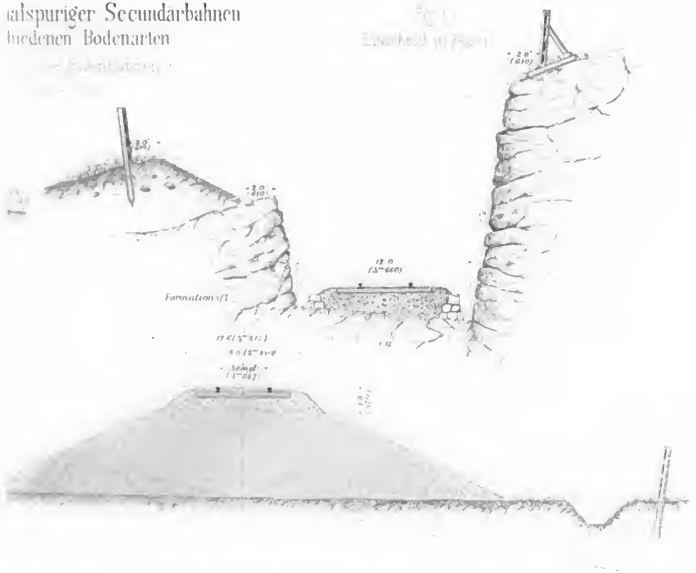
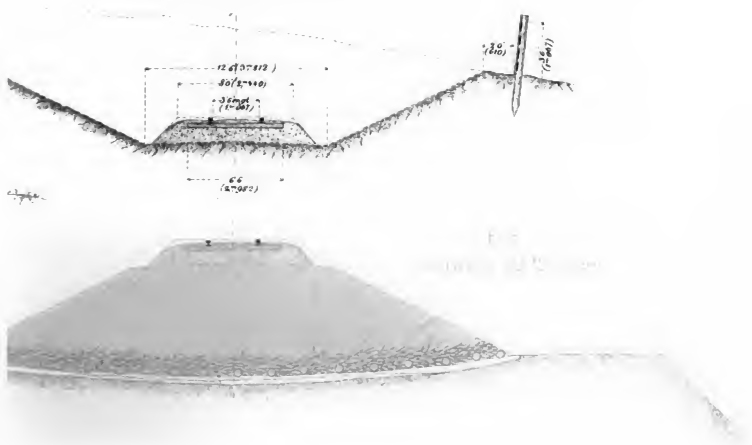


Fig 6
Einschnitt in gewöhnlicher Erde



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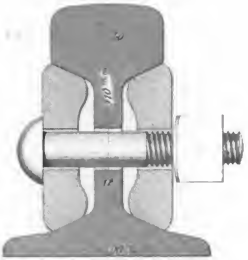
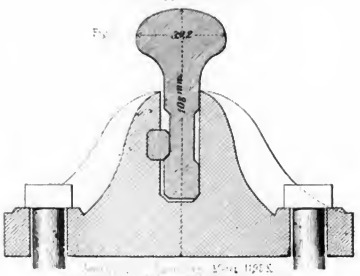
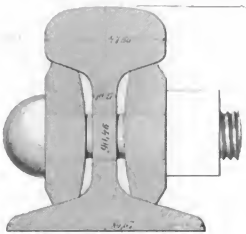
Nebenlinien der
Schweizer Nord-Ostbahn.

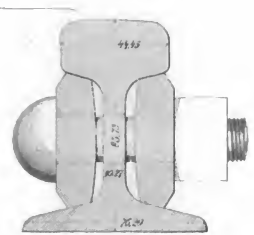


Schmalspurige
Oberschlesische E.B

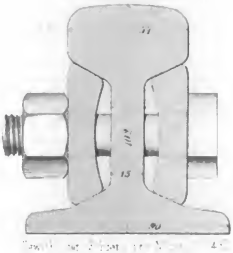


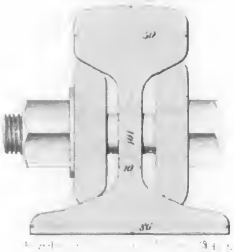
Schmalspurige
Norwegische E.B.





Murgthal E.B
(Rastatt-Gernsbach)





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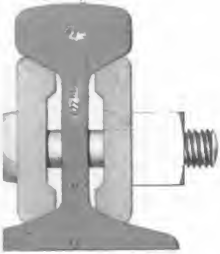
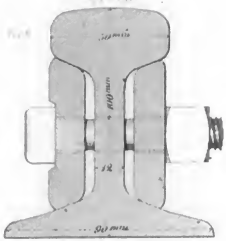
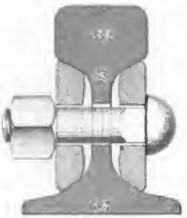
Neumünster-Tönning E B



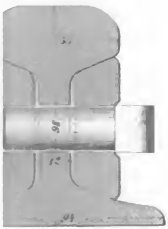
Schmalspurbahn. Winkeln-Appenzell



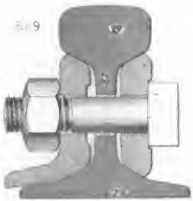
Schmalspurige Oberschlesische E B



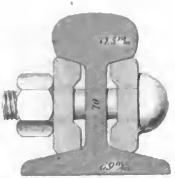
Ferjamos E B

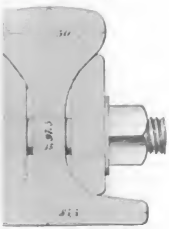


Rostocken-Markndorf (schmalspurig)

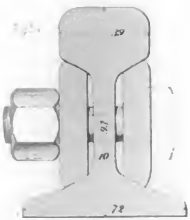


Schmalspurbahn Ocholt-Westerstede

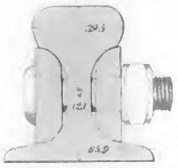




Broelthalbahn. (schmalspurig)



Lambach-Gemundener Bahn (schmalspurig)



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Eiserner O

Fig. 2

Fig. 4
Backen mit Keil

Fig. 1
System Heusinger
mit Brücksch
1:5 d nat G

Sattel in Curven
Fig. 5.

im Mittel
am Stoss

Fig. 6
Schrauben für Querschwellen

Fig. 3

Fig. 7 Längenschnitt 1:20 d nat

Fig. 19
Fig. 20
Krampen
Vorreiber Platten

Quer Schwelle
Zunge
Lang schwellen

Fig. 16
2 Querverbindungen in der Mitte der Schiene

System
mit
Keil
1:5 d nat Gr

Zunge
Querschwelle am Stoss der Langschwellen

Fig. 8 Grundriss

Lith Anst. v F Wirtz Darmstadt

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Fig 10

System Völklinger Hütte

Fig 10a

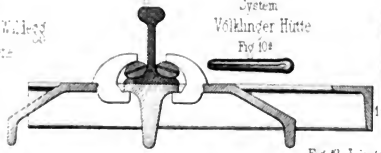
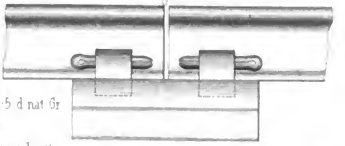


Fig 11.



1:5 d nat Gr

Fig 12. Längenschnitt

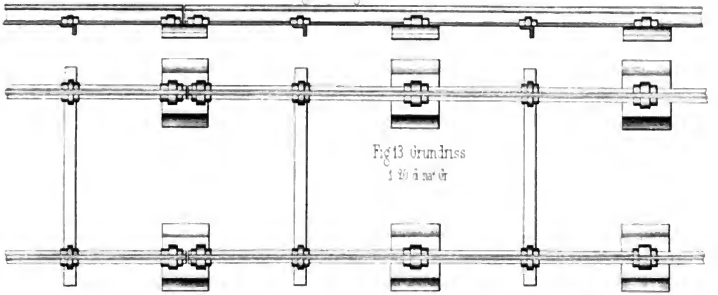


Fig 13 Grundriss

1:20 d nat Gr

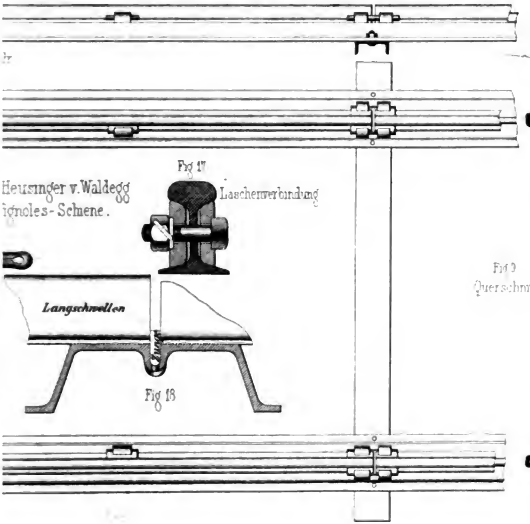
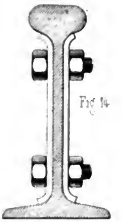


Fig 14.



System Hartwich

Heusinger v. Waldegg

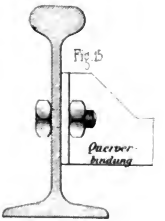
Fig 17

Laschenverbindung

Fig 9

Querschnitt

Fig 15



1:5 d nat Gr

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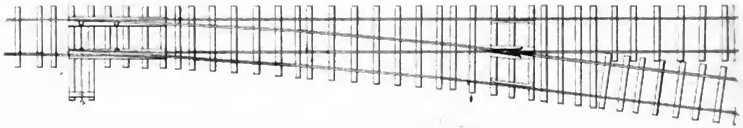
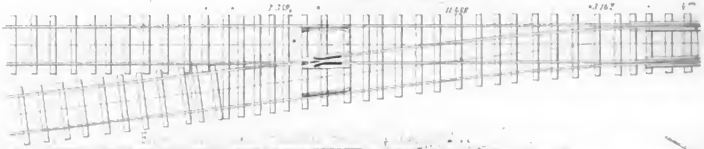
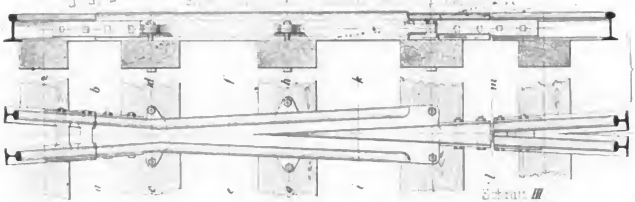
Fig 1. Rechtsweiche Massstab 1:200

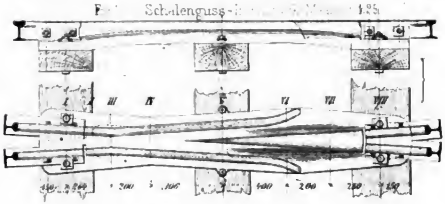






Schnitt III

Schnitt IIII



Schnitt V

Massst 1:10

Massstab 1:10

Schnitt c-d

Massstab 1:10

Schnitt i-k

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Fig. 8. Zungenkasten der Rechtsweiche. Maassst. 1:50.

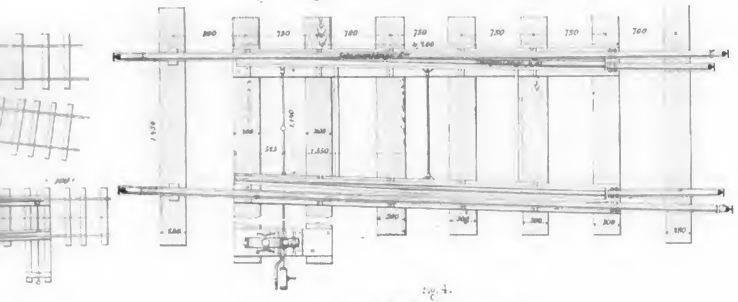


Fig. 9.

Zungenkasten der Linksweiche.

Maassst. 1:50.

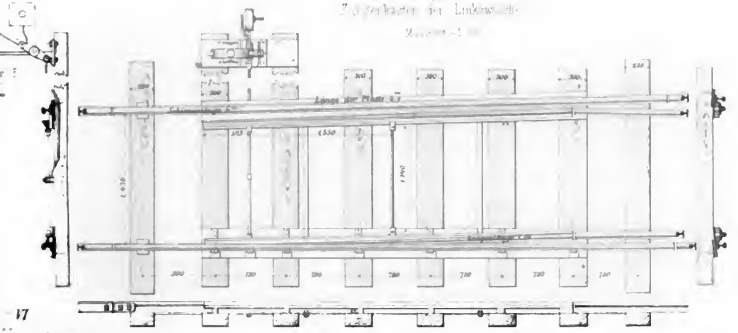
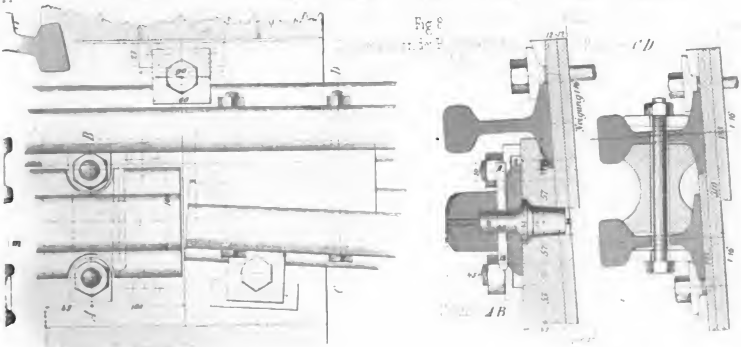


Fig. 8



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Weichen und Stofsverbu

Fig 1. Ausweichung.

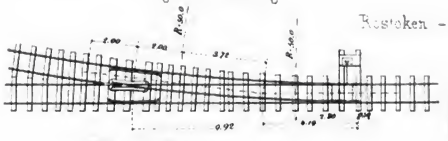
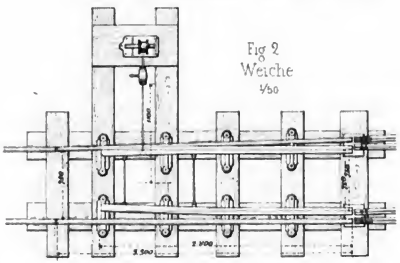


Fig. 9. Weichenstuhl. 1/5.



Rostoken – Marksdorf

Fig 2 Weiche 1/50

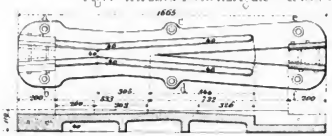
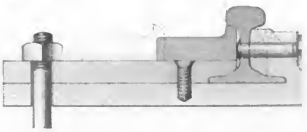
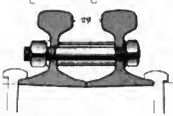


Fig 8 Zwangschiene

Weiche Fig 7 Drehstück





Herzstück Fig 4 Schnitt a b 1/10

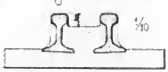


Fig. 3 Herzstück von Hartguss 1/25 nat. Gr.

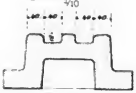
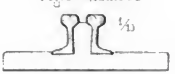
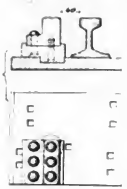


Fig 5. Schnitt c-d 1/10

Fig. 6 Schnitt e-f 1/10





Schweizer Localbahnen.

Weichenverbindung mit geraden Geleisen.

Fig. 10 Allgemeine Anordnung 1:500

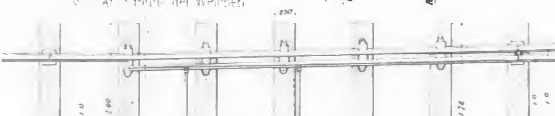


Fig. 13

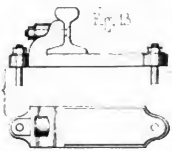
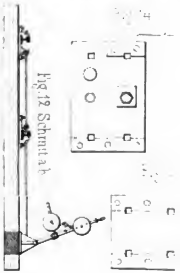


Fig. 12 Schnitt a b



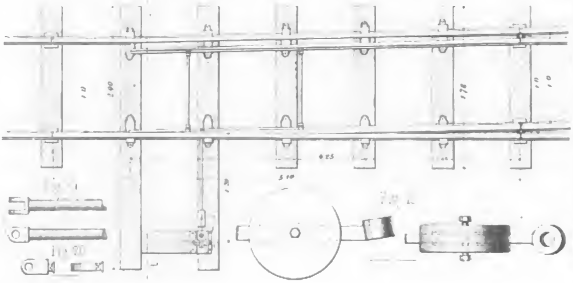


Fig. 20

Lith. Anst. v. F. Wirtz Darmstadt

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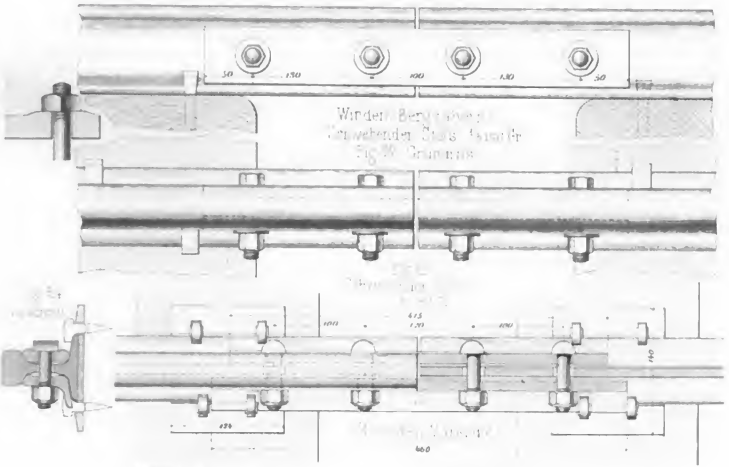
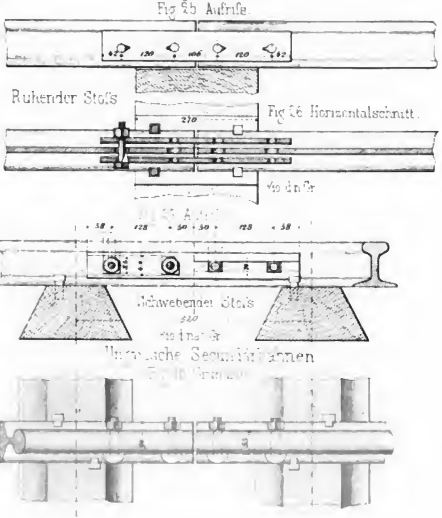
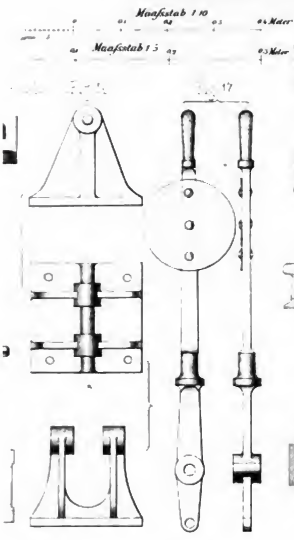
Fig 21 Aufriss



Murgthalbahn
Fig 25 Aufriss





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Wasserstationen.

Reservoir für 10 km Wasser auf Station „Leuze."

Fig. 1 Ansicht.

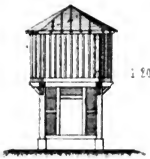
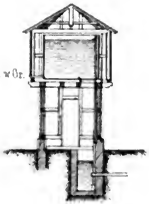


Fig. 2 Querschnitt.



1 200 d. w. Gr.

Fig. 3 Grundriss

Fig. 4 Schnitt a b

Einfaches Wasserreservoir

Fig. 5 Ansicht

Fig. 6 Grundriss

1 300 d. w. Gr.

Fig. 7 Längenschnitt

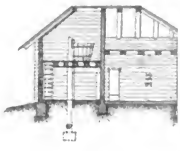
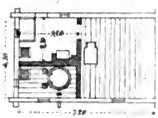


Fig. 8 Grundriss



Secundäre Eisenbahnen in Ungarn.

Wasserstationen der Linien Valkány-Perjamos und Vojtek-Bogsan.

Fig. 11 Längenschnitt.

1 250 d. w. Gr.

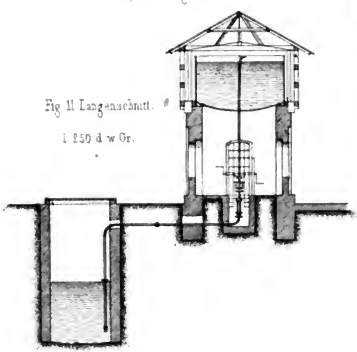


Fig. 12 Grundriss

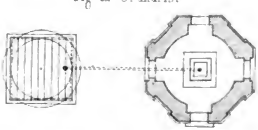


Fig. 14 Querschnitt

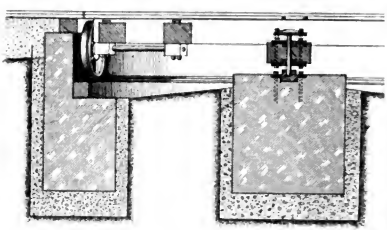
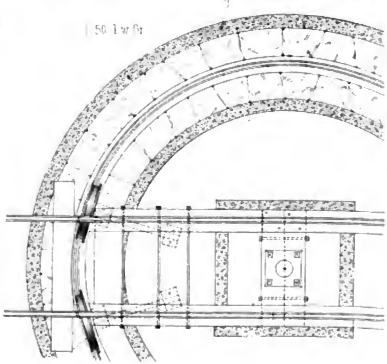


Fig. 15 Grundriss.

1 50 d. w. Gr.



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Wärterhaus mit Wasserstation auf der Schmalspurbahn, Rostocken-Marksdorf

Fig 9. Ansicht

Fig 10. Querschnitt

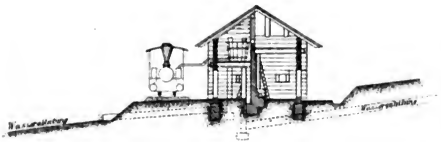


Fig 7 u. 8 u. 9 Maßstab 1:200 d. w. Gr.

Schmiedeeiserne Drehscheibe der Ergastiria-Erzbahn

Fig 16. Schnitt a b.

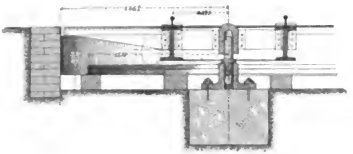


Fig 13 Amerikanische Wasserstation

1:200 d. w. Gr.

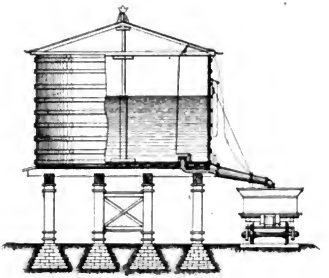


Fig 17 Schnitt C D

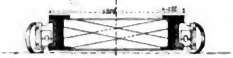
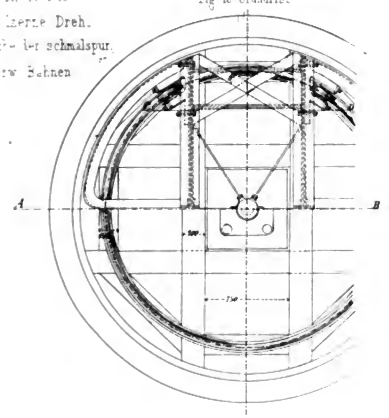


Fig 14 & 15

Eiserne Dreh-scheibe der schmalspur. Norw. Bahnen

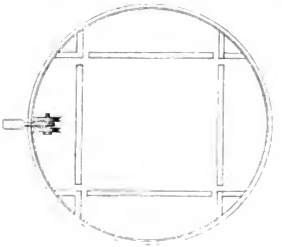
Fig 18 Grundriss



Drehscheibe für schmalspurige Transport- und Grubenbahnen.

Fig 19 Querschnitt

Fig 20 Grundriss.



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Grundriss von Bahnhofen und Haltestellen.

Fig 1 Grosse Haltestelle Hanerau der Neumünster-Tönninger Eisenbahn

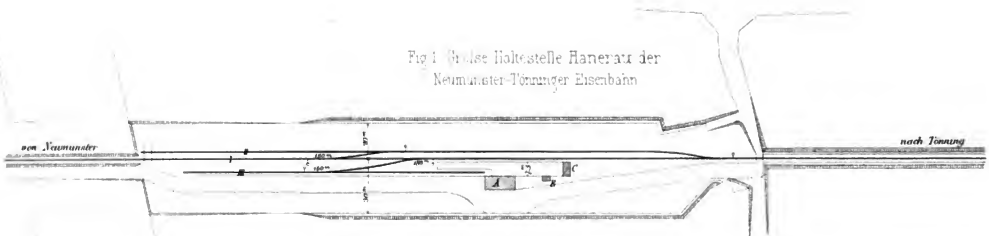
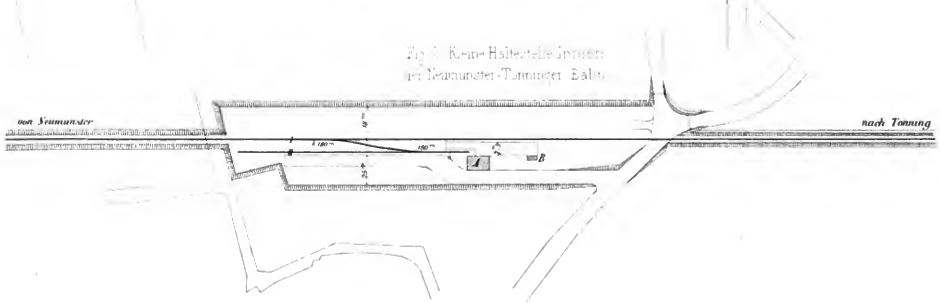


Fig 2 Kleine Haltestelle Immenstedt der Neumünster-Tönninger Bahn



Nebenlinien der Schweizerischen Nordostbahn (normalspurige)

Fig 3 Zwischenstation II Classe

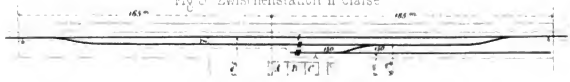
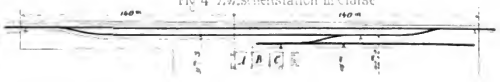


Fig 4 Zwischenstation III Classe



Schmalspurige Norwegische Bahnen

Fig 5 Haltestelle

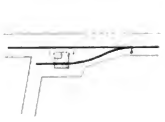


Fig 6 Zwischenstation II Classe

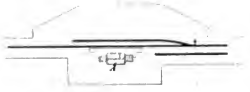


Fig 7 Zwischenstation I Classe

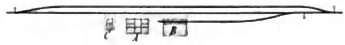
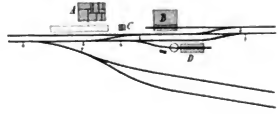
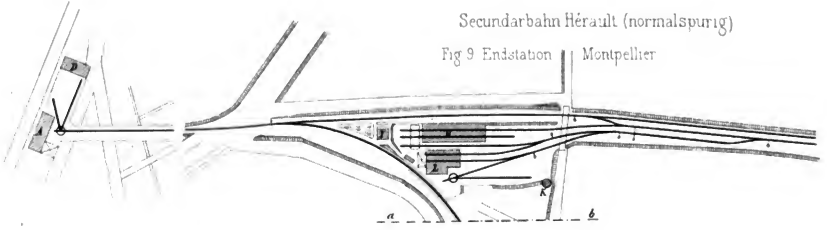


Fig 8 Endstation II Classe



Secundarbahn Hérault (normalspurig)

Fig 9 Endstation Montpellier



zu Fig 9

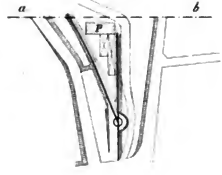


Fig 10 Zwischenstation Lattes

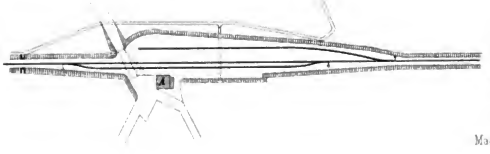
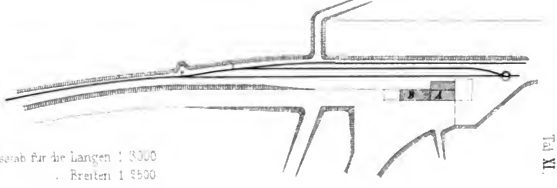


Fig 11 Endstation Palavas



Maassstab für die Längen 1 : 3000
" " Breiten 1 : 9500

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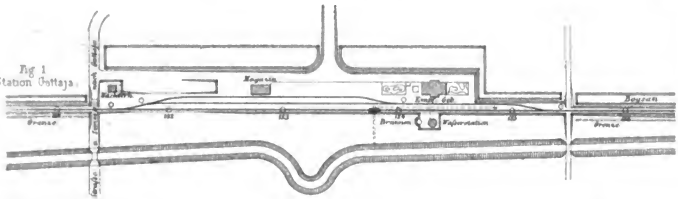
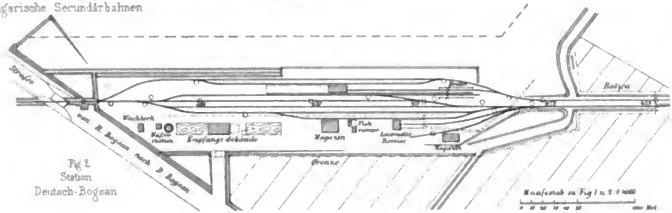
Fig 1
Station Gattaja



Ungarische Secundärbahnen

Fig 2.
Station
Deutsch-Bogsan



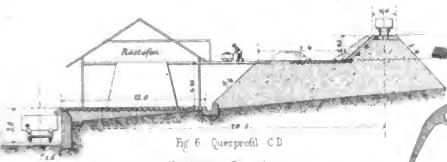


Fig 6 Querprofil C D

Fig 3
Abladestation Markodorf

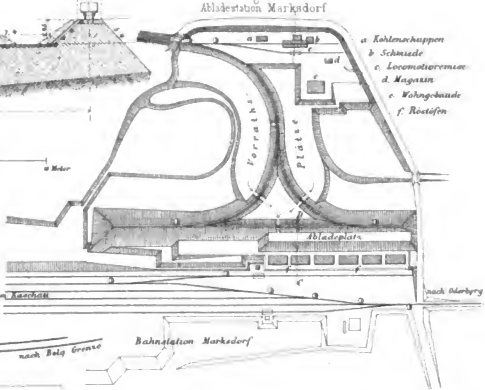


Fig 7
Verbindungsbahn mit dem Hüttenwerk
„Providence"

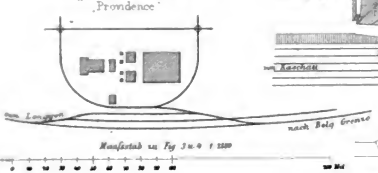


Fig 4
Auflade Station Rosteken

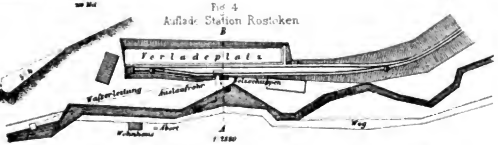
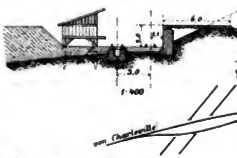


Fig 5.
Querprofil A-B.



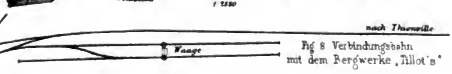


Fig 8 Verbindungsbahn
mit dem Bergwerke „Tillot's"

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Neumünster-Tönning

Fig 1. Kleine Haltestelle Fig 2.

Fig 4. Grosse Haltestelle

Fig 3.

a. Güterraum
b. Expedition
c. Wartesaal
d. Flur
e. Wohnung des Wärters
f. d^{ten} d^{ten} Expedienten

Fig 6.

Norwegische Bahnen.

Fig 15.

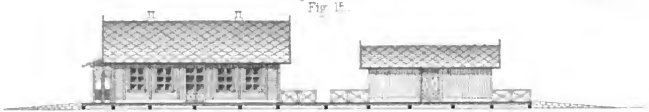
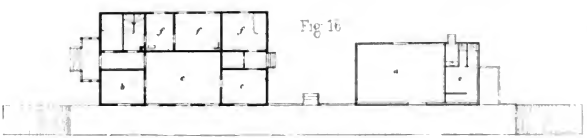


Fig 16



a. Güterraum
b. Bureau
c. Wartesaal
e. Pastor
f. Wohng d. Stationswärters
g. Magazin

Norwegische Bahnen.

Fig 17

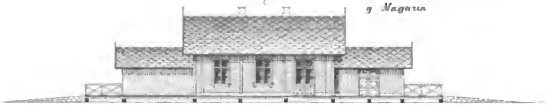
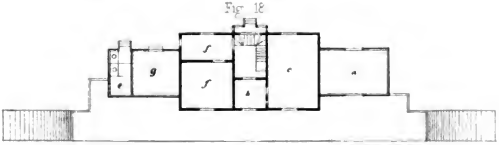


Fig 18



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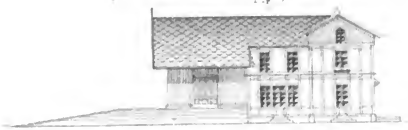
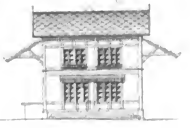
Schweizerische Nordostbahn.

Fig 7 Effretikon-Hinwil Fig 8





1 Stock.

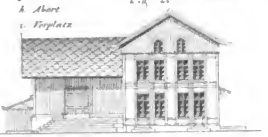
Fig 9

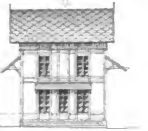
Fig 10.

a Güterraum
b Bureau
c Wartesaal
d Geschirrkeller
e Abtritt
f Wohnzimmer
g Küche
h Abort
i Vorplatz

Schweizerische Nordostbahn.

Fig 11. Wädenswil-Einsiedeln Fig 12.





1 Stock

Fig 13

Fig 14

a Güterraum
b Bureau
c Wartesaal

Einfacher Wartesaal. Doppelter Wartesaal.

Fig 15 Fig 16 Fig 17 Fig 18 Fig 19

Fig 20

Fig 21

Güterraum
Bureau
Wartesaal

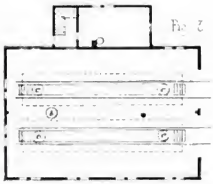
b Bureau
c Wartesaum
e Abort

Locomotiv-Remisen u

sowie Guters

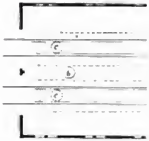
Nebenlinien der Schweizer Nordostbahn.

Fig. 1. Station Einweil Fig. 2. Fig. 4. Station



1:400

a Local für das Fahrpersonal darüber
b Ofen, Wasserreservoir
c Kamin



Norwegische Schmalspurbahnen

Fig. 11 Fig. 12

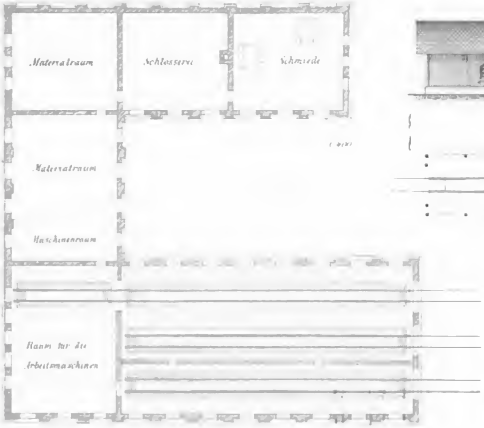
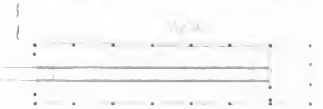
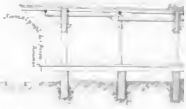


Fig. 14 Einf. Local





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ppen

Rostoken-Marksdorf

Fig. 7 Ansicht

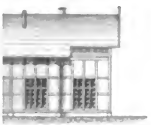


Fig. 8 Längenschnitt

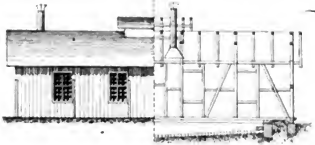


Fig. 9 Querschnitt

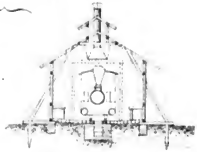
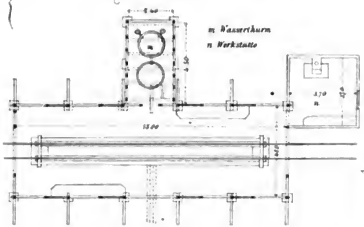


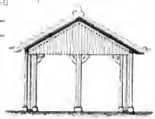
Fig. 10 Grundriss.



m Wasserthurm

n Werkstätte

Fig. 23 Giebelansicht.



Maassstäbe

Fig. 16 u. 17 23 1:400

Fig. 7, 10 u. 1:250

Fig. 24 u. 1:500

Fig. 25 u. 1:300

Nebenlinien der Schweizer Nordostbahn — Wagenremise auf Station Wettingen für 4 Wagen

Fig. 22 Querschnitt.

Fig. 19 Längenansicht.

Fig. 20 Längenschnitt.

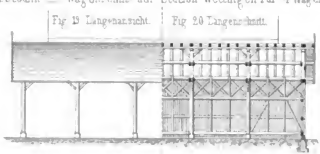


Fig. 15

Fig. 17

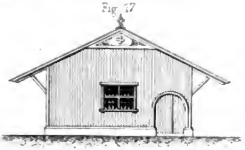
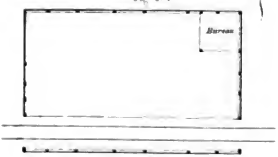


Fig. 21 Grundriss

Fig. 18.



Bureau

Ungarische Secundärbahnen

Fig. 24

Lokomotivremise

Werkstätte

Wohnung

Wohnung

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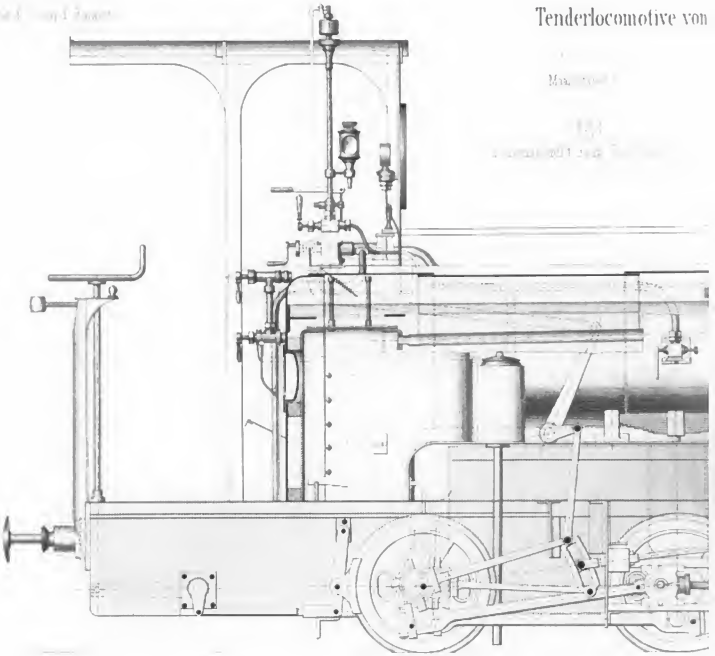

Fig. 7. Horizontaldurchschnitt durch den Cylinder

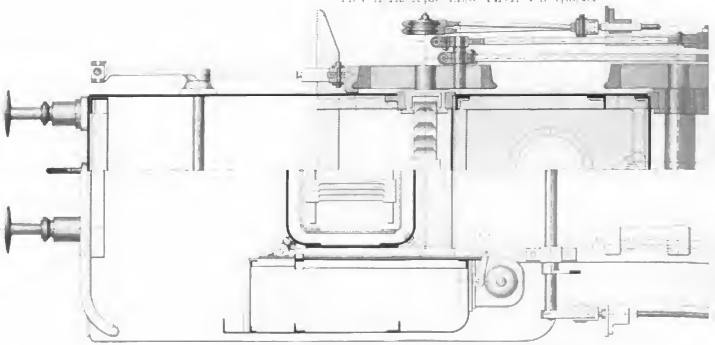

Fig. 8. Horizontalschnitt über dem Wasserkasten

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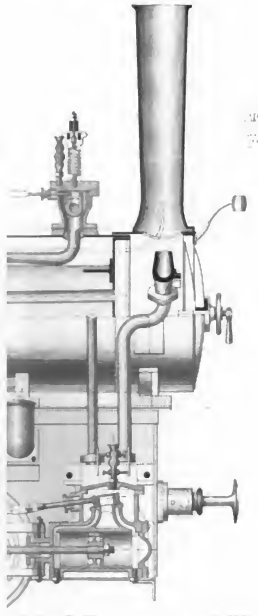

Fig. 4.
Querschnitt durch
gerade Kessel.

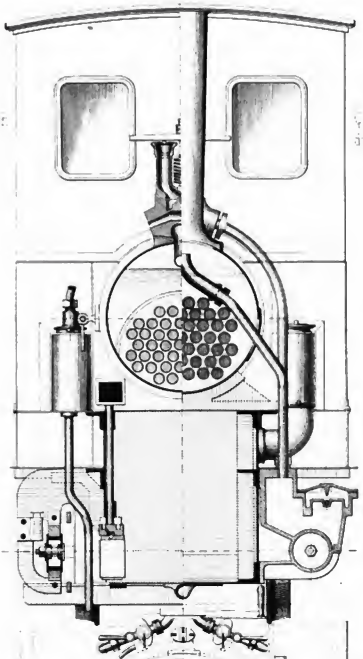

Fig. 5.
Querschnitt
durch Feuer-
kammer.

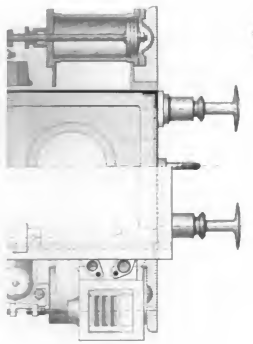

Fig. 6.
Querschnitt durch
Feuerkammer.

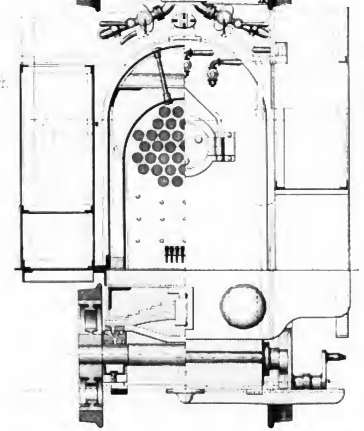

Fig. 7.
Hinter-
ansicht.

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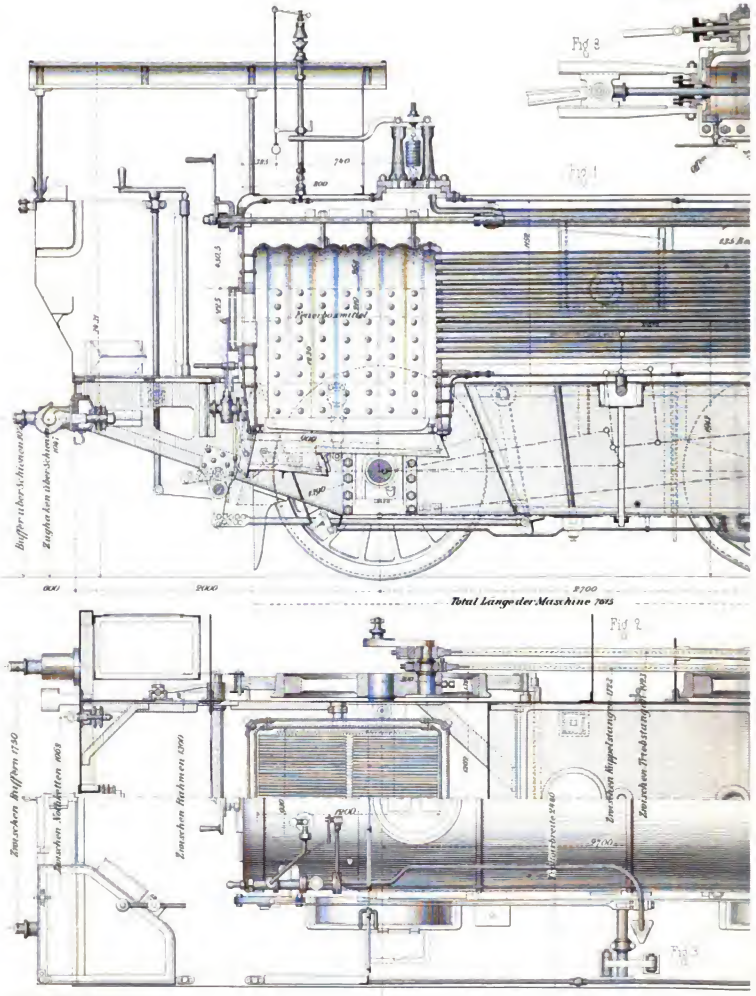
Tenderlocomotive der



Lith. Anst. v. F. Wirtz, Darmstadt

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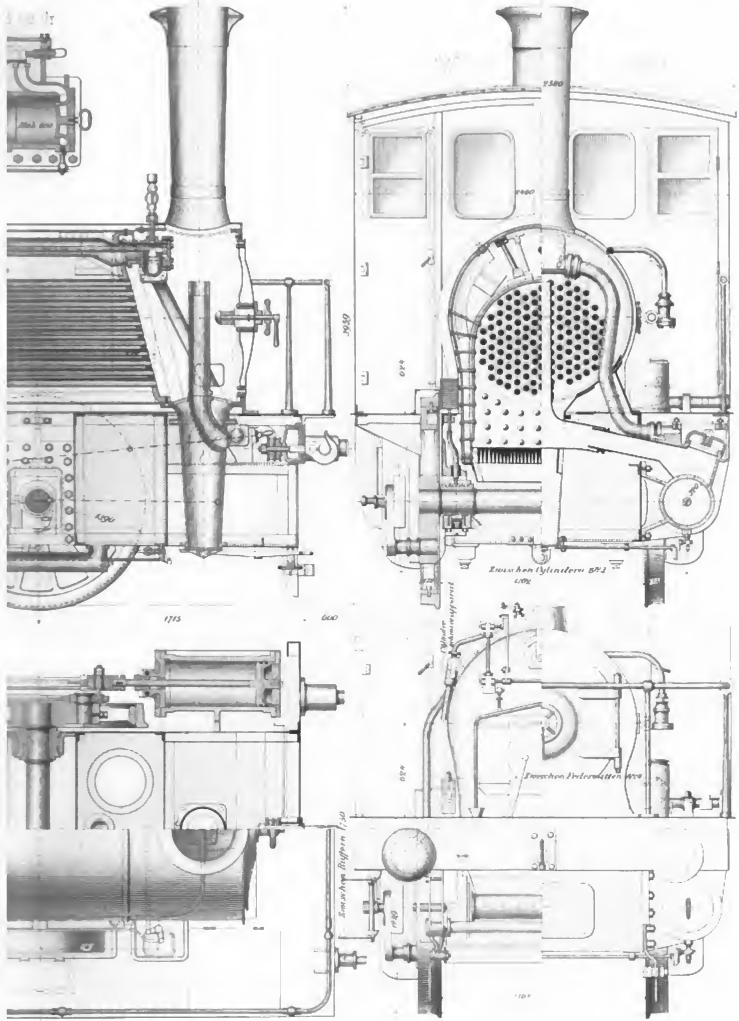

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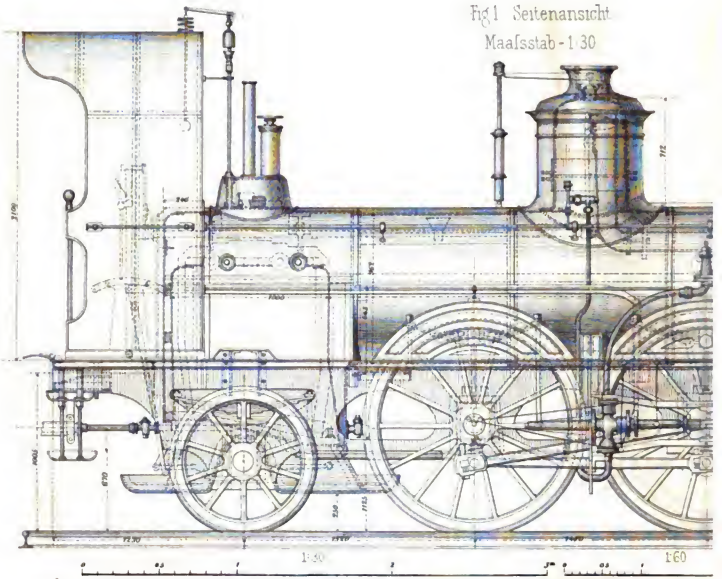
Locomotive mit Tender für die nor
gebaut von der Hannoverschen

Fig 1 Seitenansicht.
Maafsstab - 1:30



1:30 1:60

Fig 3. Horizontalschnitt.

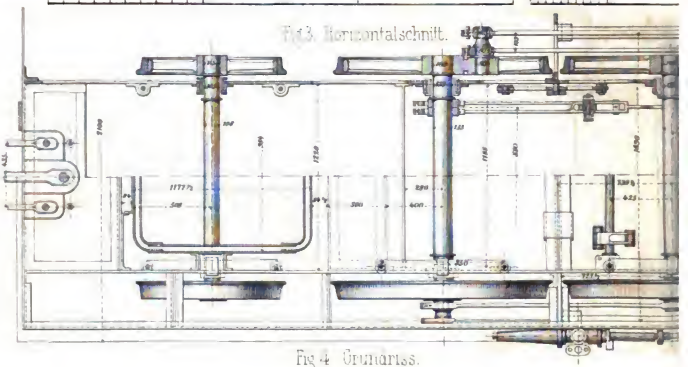


Fig 4 Grundriss.

Lith. Anst. v. F. Wirtz, Darmstadt

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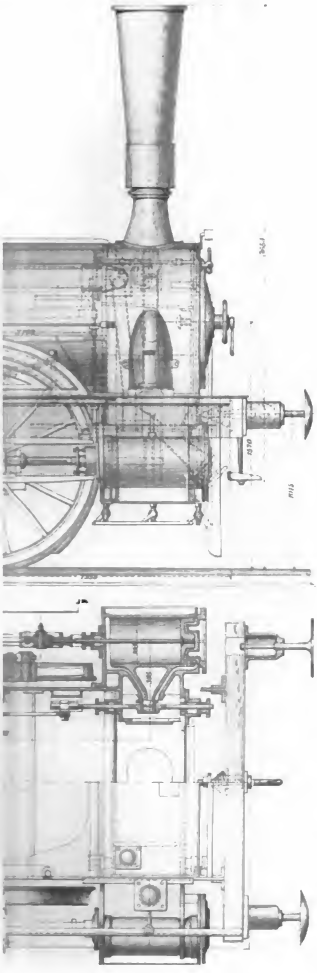
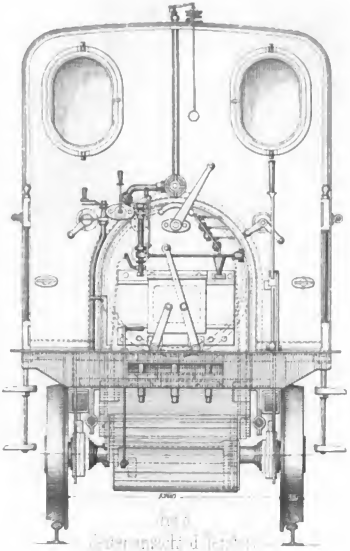
Fig 2. Hinteransicht





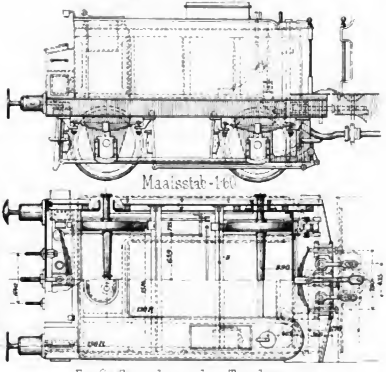


Fig 6. Grundriss des Tenders

Verlag v. W. Engelmann

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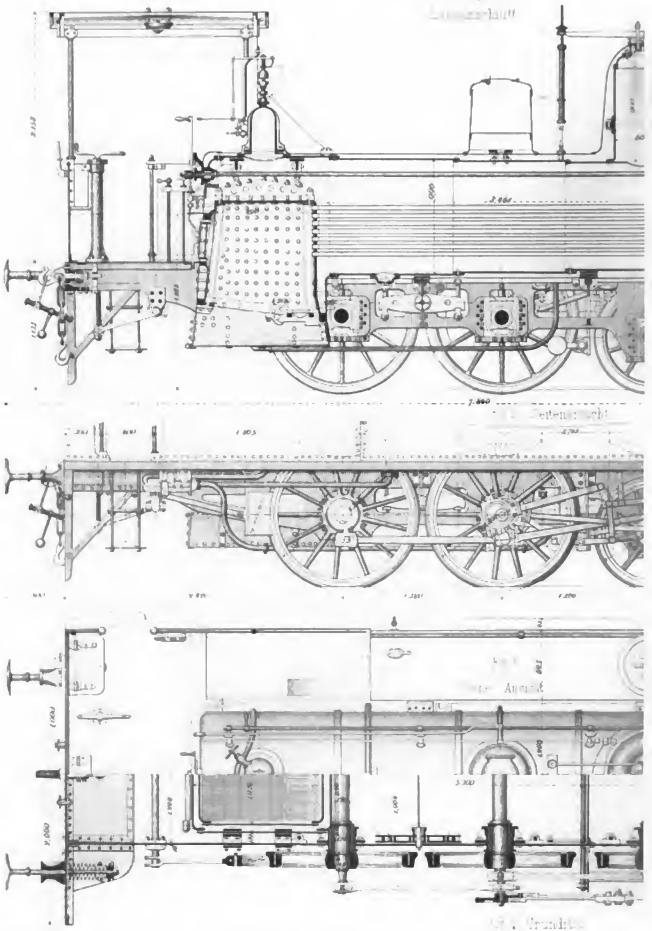

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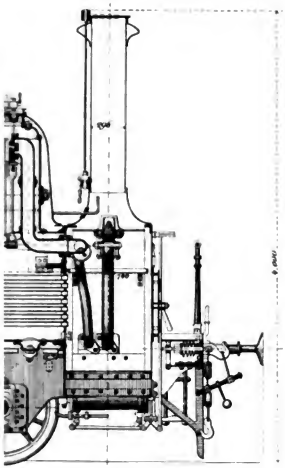
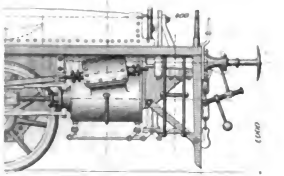




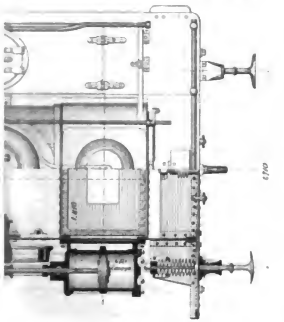


Fig 7
Querschnitt durch

Fig 8
den Rauchkasten.

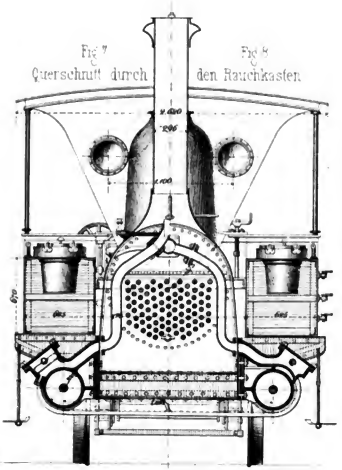
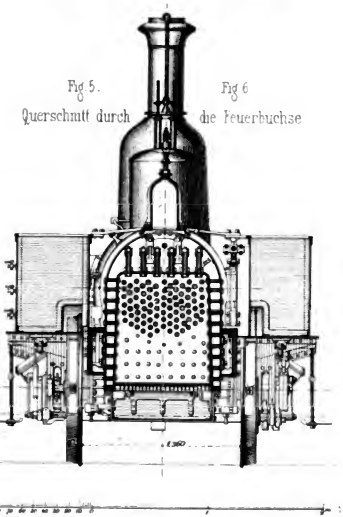


Fig 5.
Querschnitt durch

Fig 6
die Feuerbuchse



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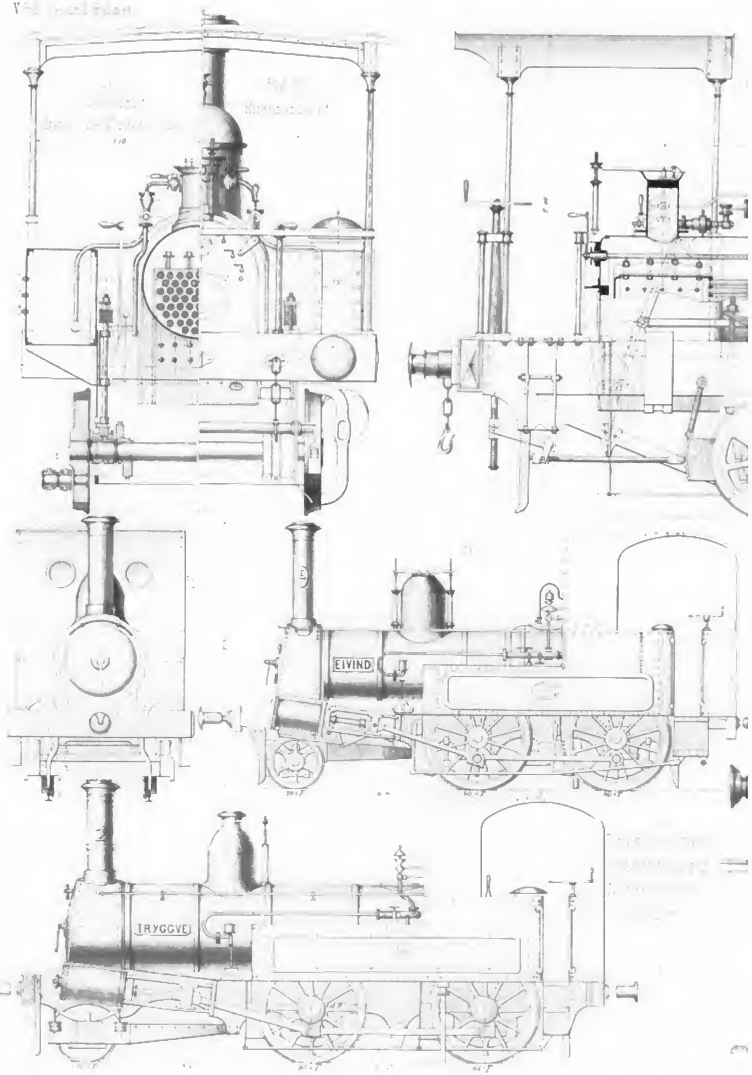

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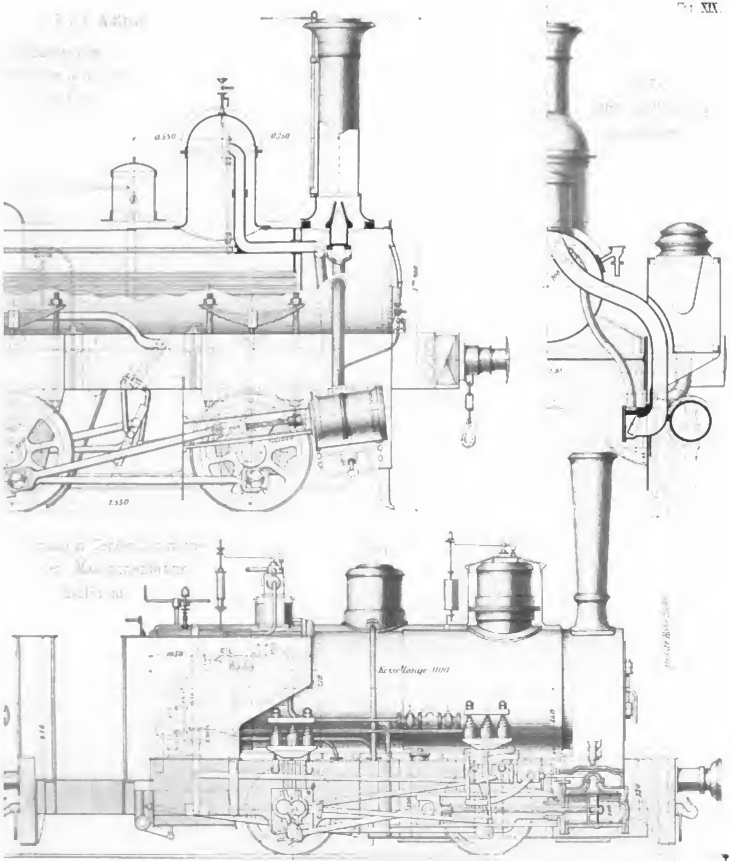

Fig. 5

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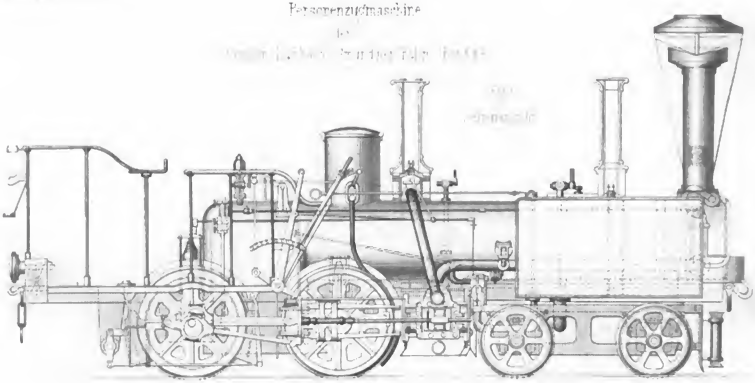
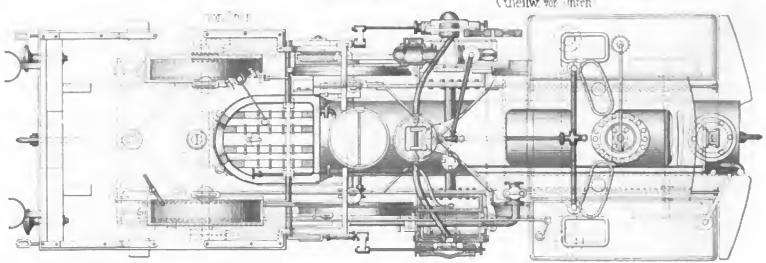
Personenzugmaschine



Maasstab 1:40

Fig. 2. Grundriss

(theilw. von Unten)



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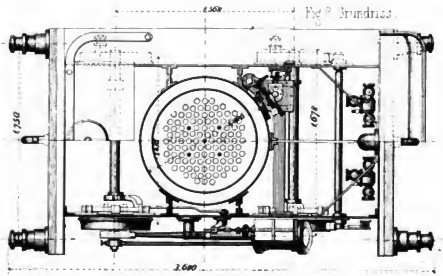

Tenderlocomotive der Harzerwerke zu Rübeland und Zorge

Fig. 4 vs.

Lith. Anst. v. F. Wirtz Darmstadt

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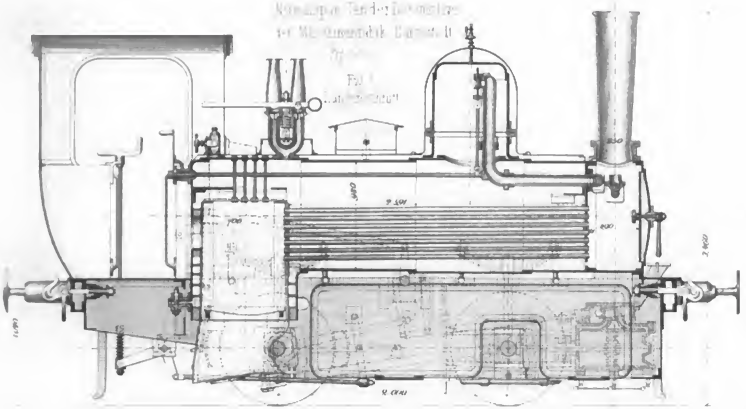
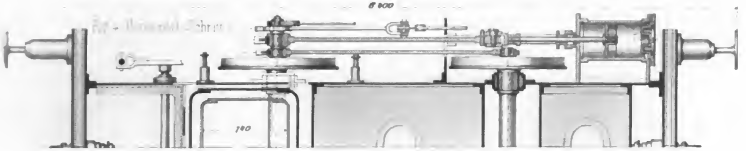




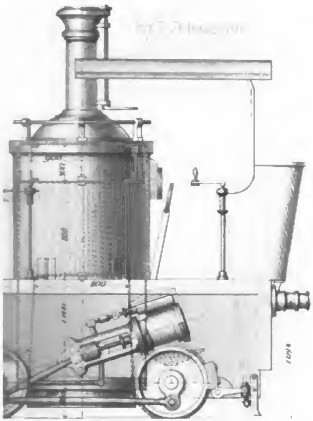
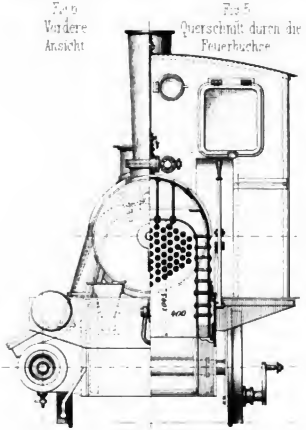


Fig 5.
Vordere Ansicht

Fig 5.
Querschnitt durch die Feuerbüchse



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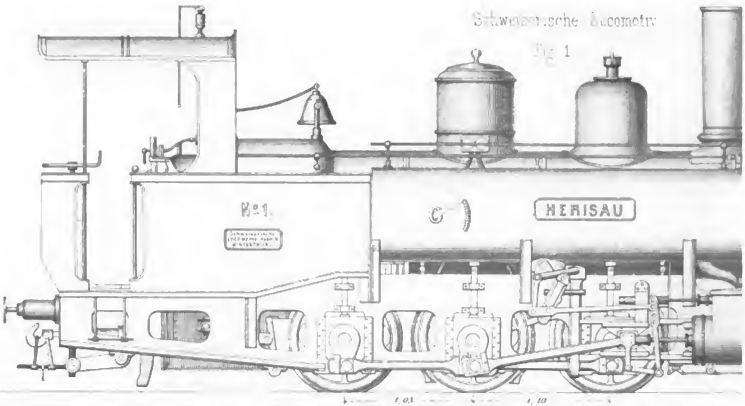
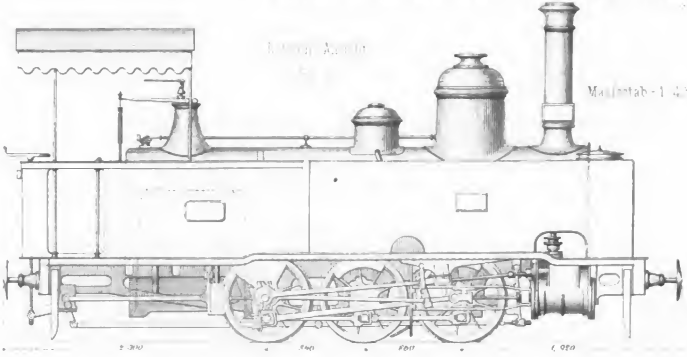
Locomotive für Sch

Schweizerische Locomotiv

Fig. 1



Oberbaum 4 Fuss Lüfte [illegible] Tendenzlocomotive 2 [illegible]



Maschinenfabrik [illegible]

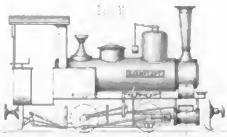
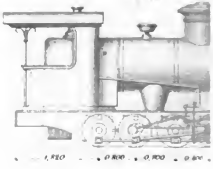


Fig. 12

Oesterr. Staatseisenbahn

Fig. 13



Lith. Anst. v. F. Wirth Darmstadt

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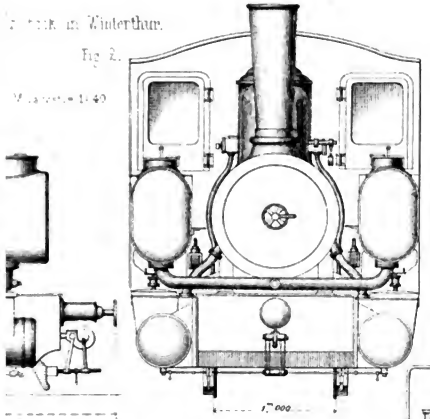
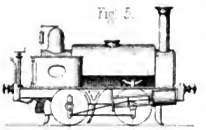
…rik in Winterthur.

Fig. 2.



H. Hughes & Cº Loughborough.

Fig. 5.



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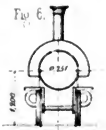


Maassstab = 1:100.

Oesterr. Staatseisenbahn Gesellschaft.
(Werkstätte Koschitza.)

Fig 7.

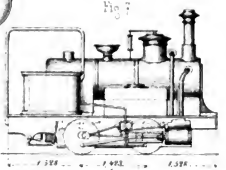
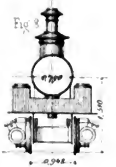


Fig 8.

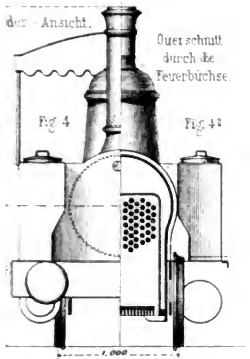


…der Ansicht.

Querschnitt durch die Feuerbüchse.

Fig 4

Fig 4a



Fox Walker & Cº Bristol

Maassstab = 1:100.

Fig. 9.

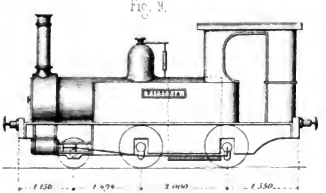
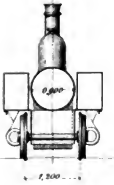
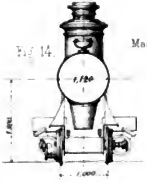


Fig. 10.



…he Maschinenfabrik Wien.

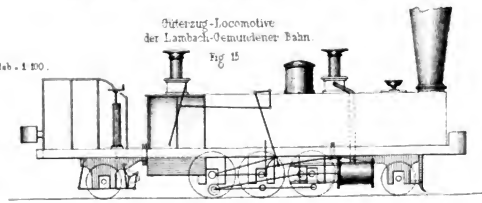
Fig. 14.



Maassstab = 1:100.

Güterzug-Locomotive der Lambach-Gemundener Bahn.

Fig 15



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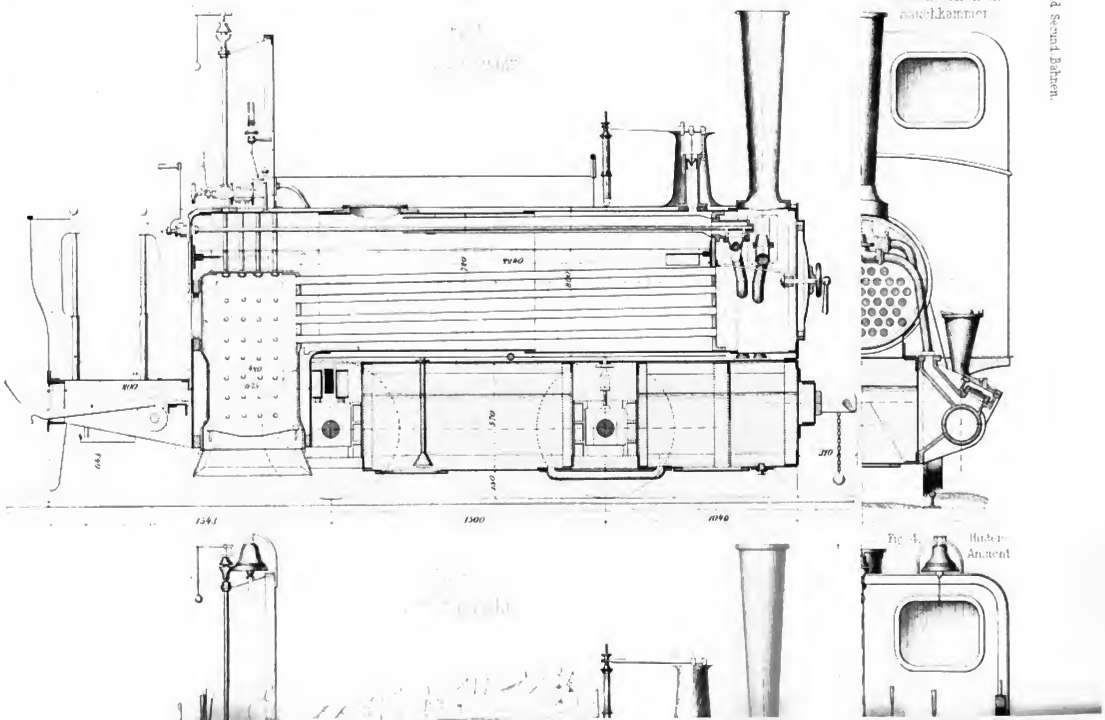
Tenderlocomotive der Schmalspurbahn von Ocholt nach Westerstede.



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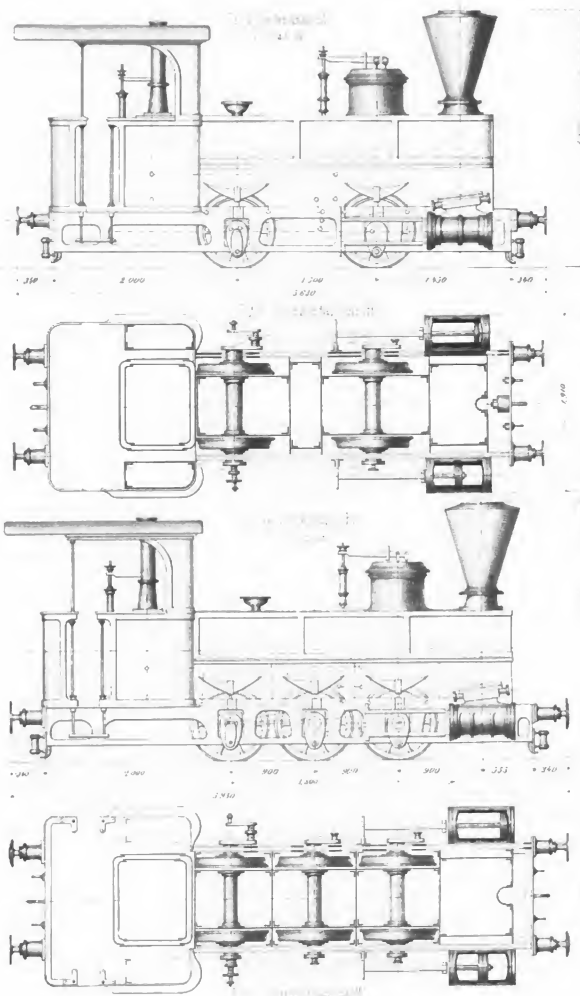

Lith. Anst. v. F. Wirtz. Darmstadt.

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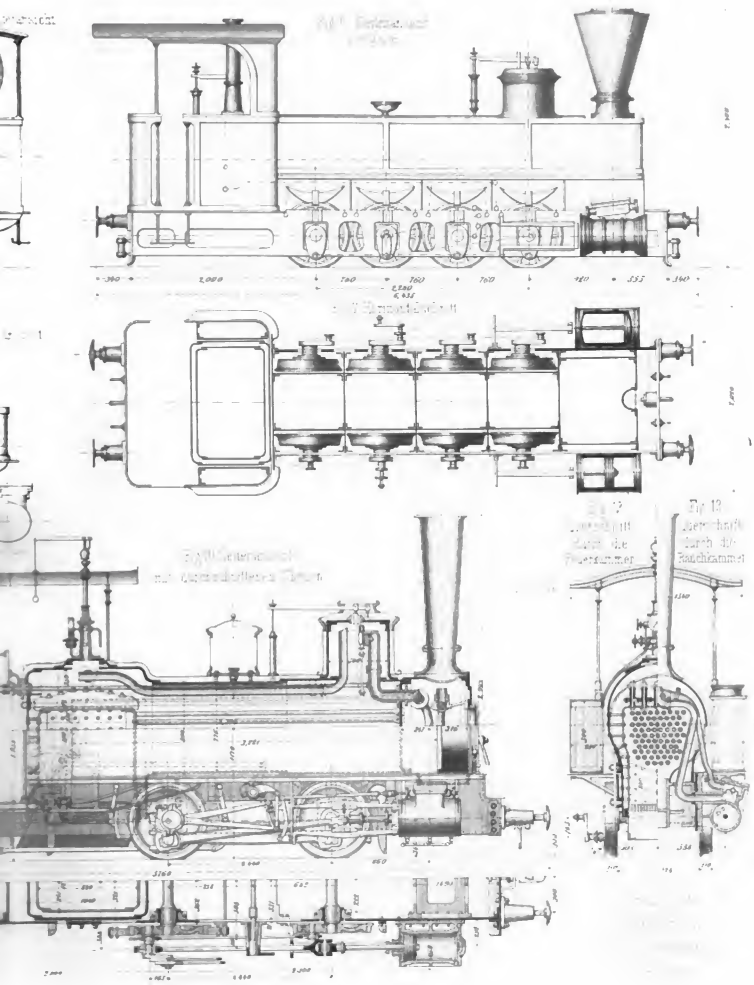

Fig 11 Horizontaldurchschnitt

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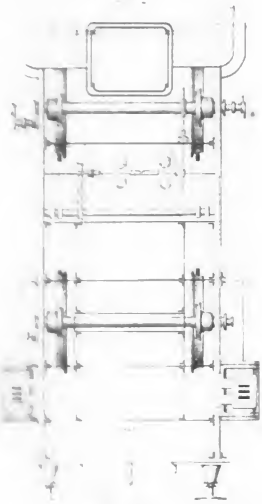

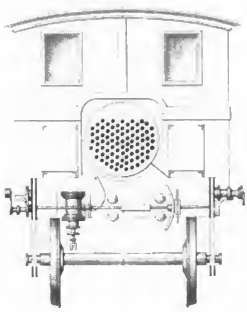

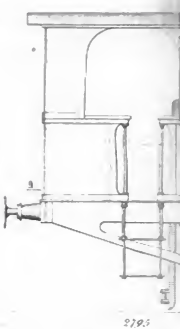

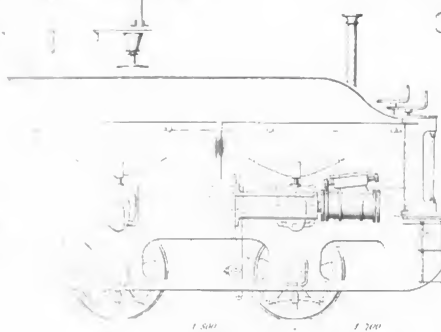

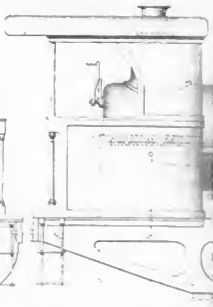

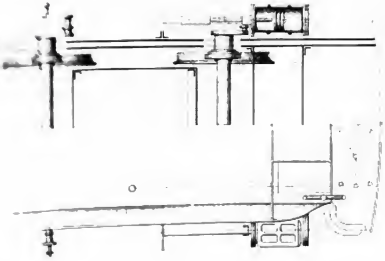

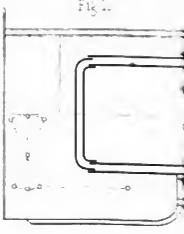

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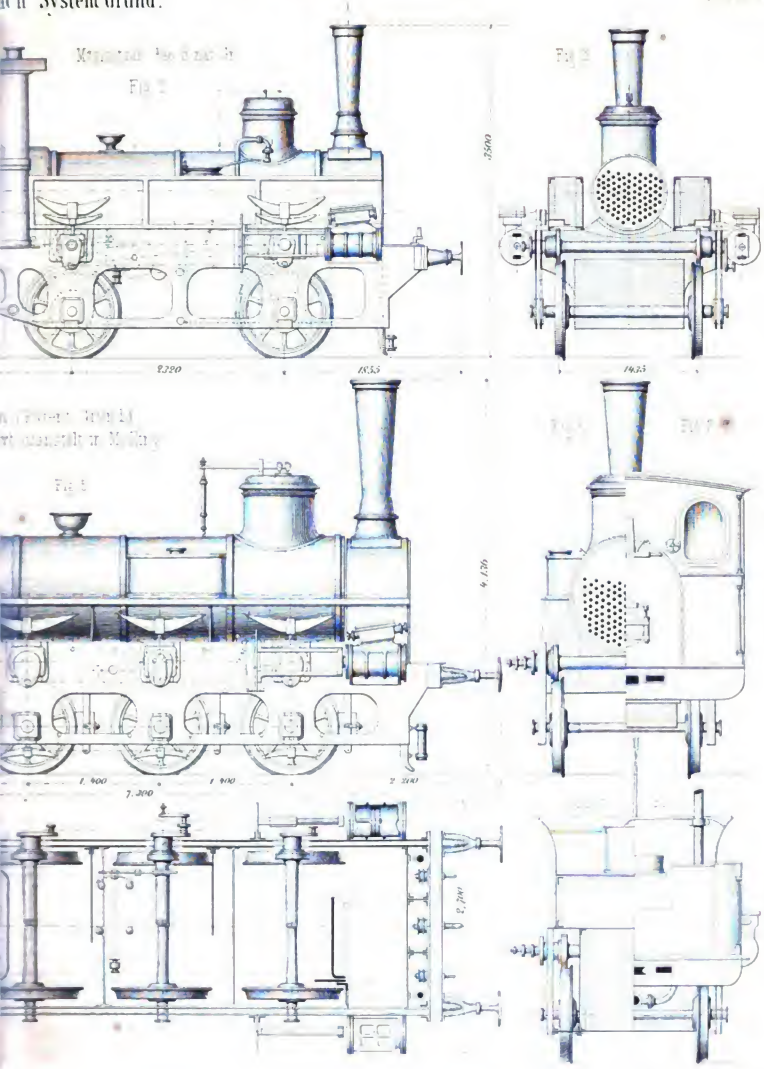

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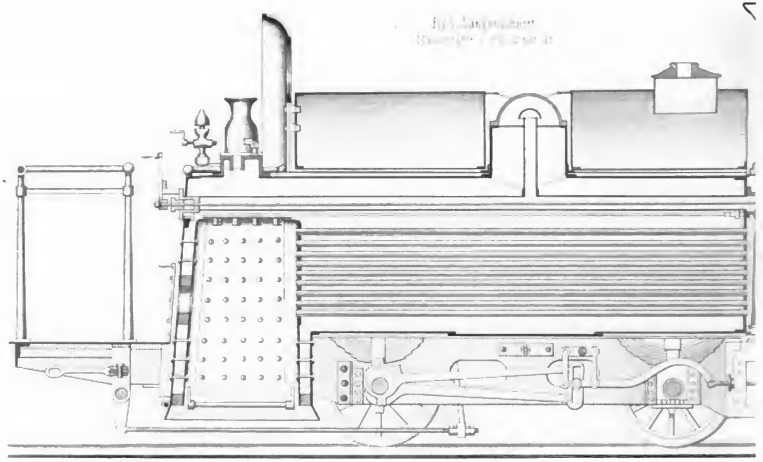
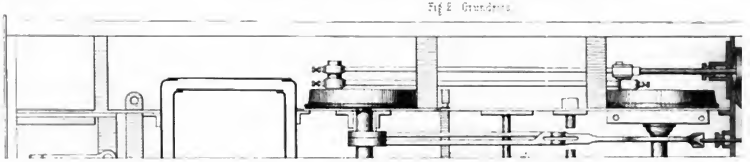
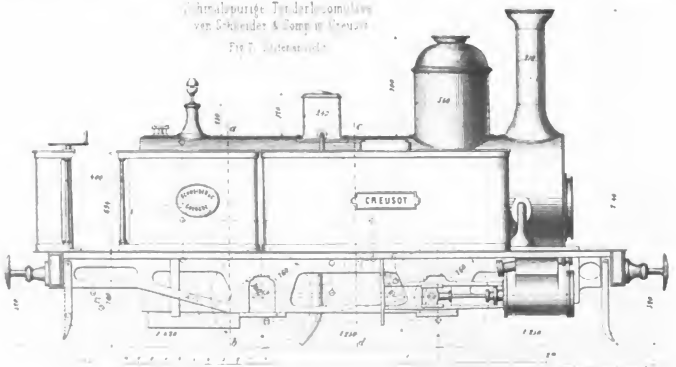


Fig 2. Grundriss.



Schmalspurige Tenderlocomotive
von Schneider & Comp in Creusot
Fig 3. Seitenansicht.



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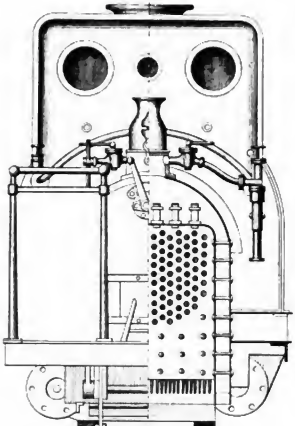


Fig 3. Hinteransicht. Fig 4. Querschnitt durch die Feuerkammer.

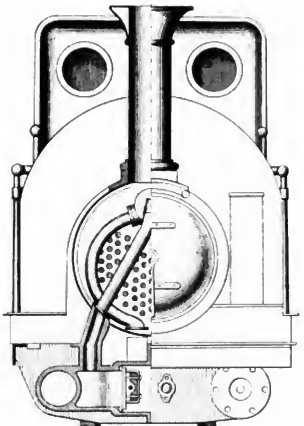
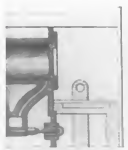
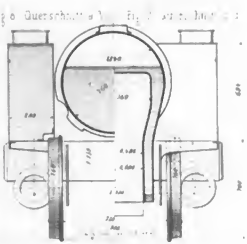
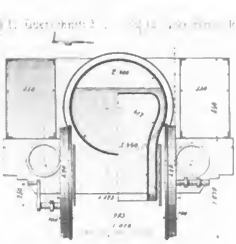
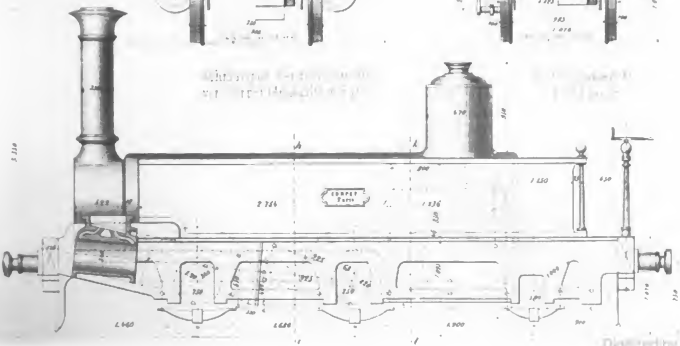


Fig 5. Querschnitt durch die Rauchkammer. Fig 6. Vordere Ansicht.









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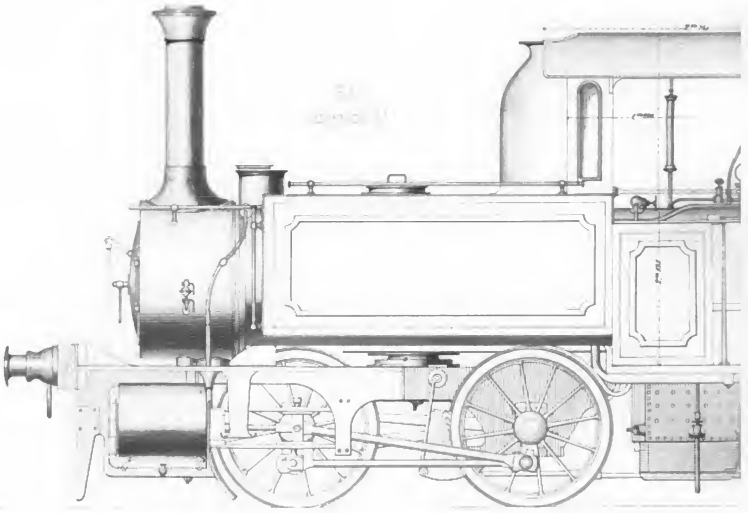
Fairlie-Locomotive der Na
gebaut von Sharp. Stew



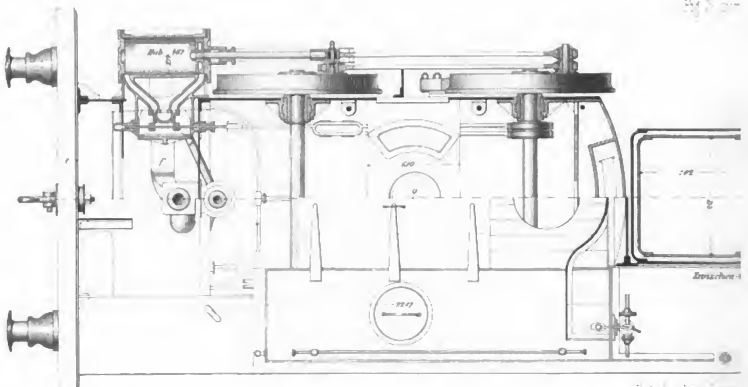


Fig. 4. Grundr. s.

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Maassstab

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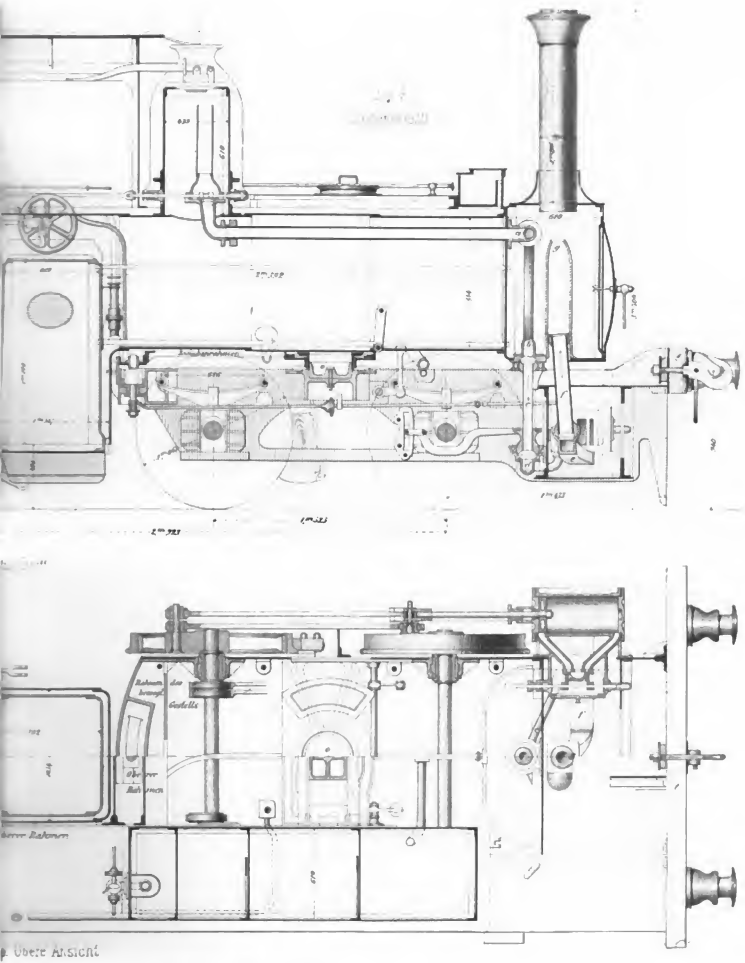

Obere Ansicht

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Fig. 1. Personenwagen der Rigaer Bahn. Fig. 2.

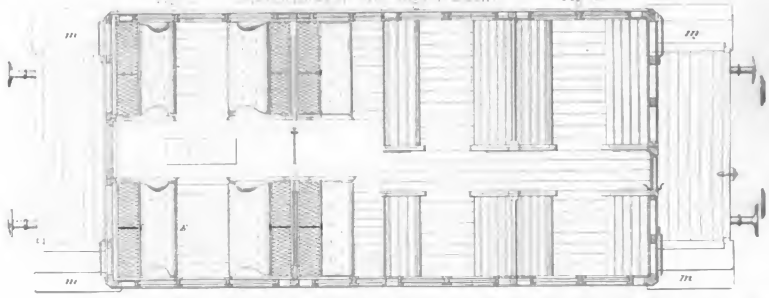


Fig. 3. Personenwagen für 1m Spurweite

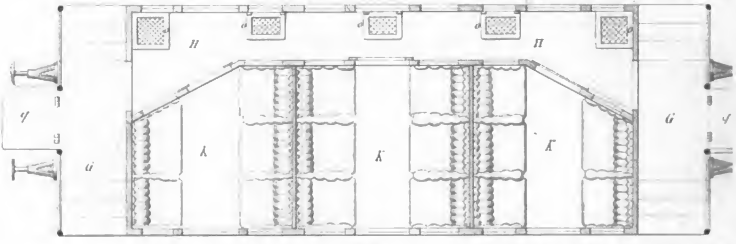


Fig. 4. Personenwagen der Schult-

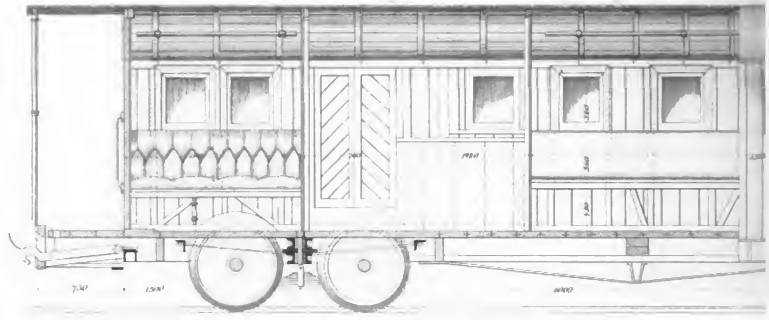
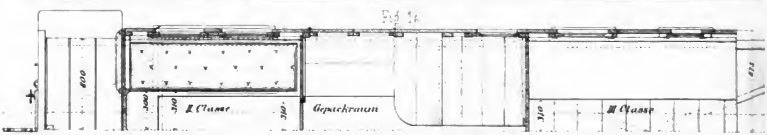


Fig. 5.



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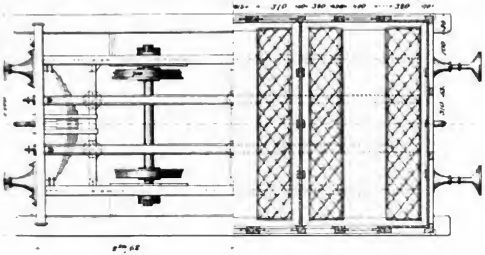
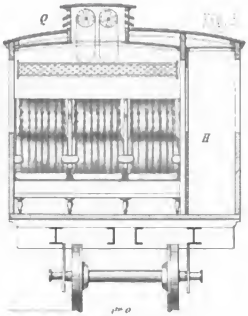
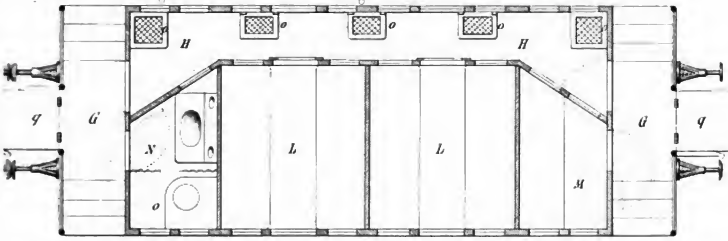
Personenwagen der Lagny-Bahn. Fig. 7





...em. Heusinger v. W. Fig. 4



...steder E. B. Fig. 8

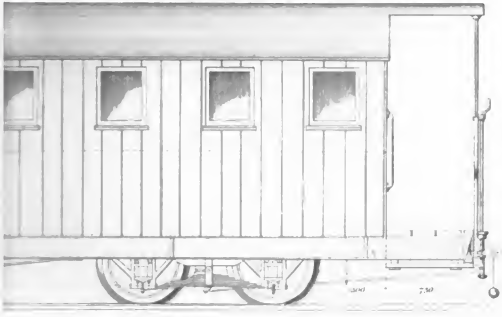


Fig. 10 Fig. 11

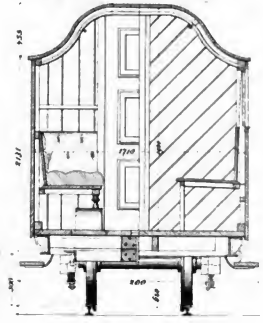


Fig. 13

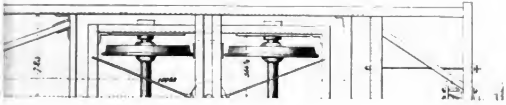


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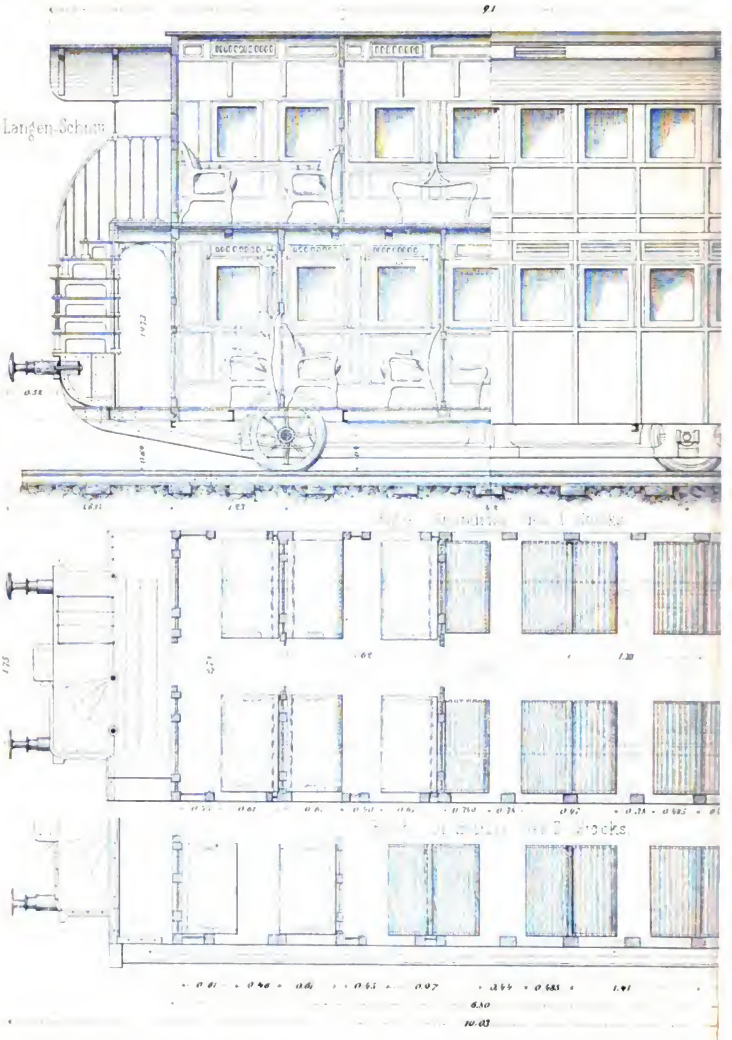
Fig 3 Langen-Schnitt



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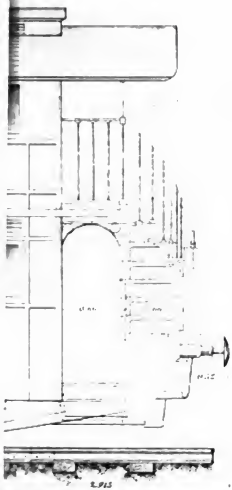

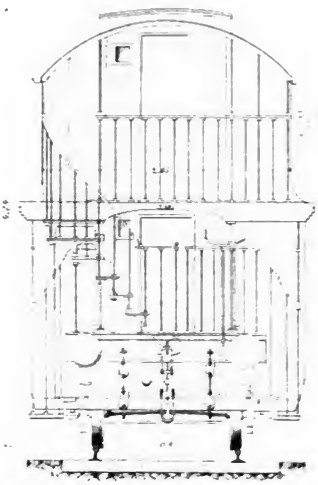

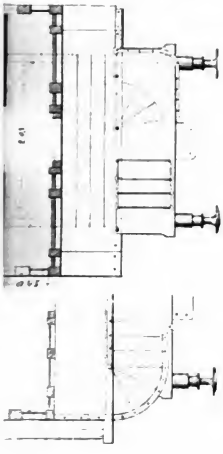

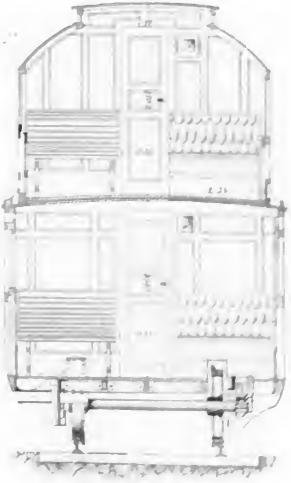

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Personenwagen 2ter Classe C

Fig 1 Seitenansicht

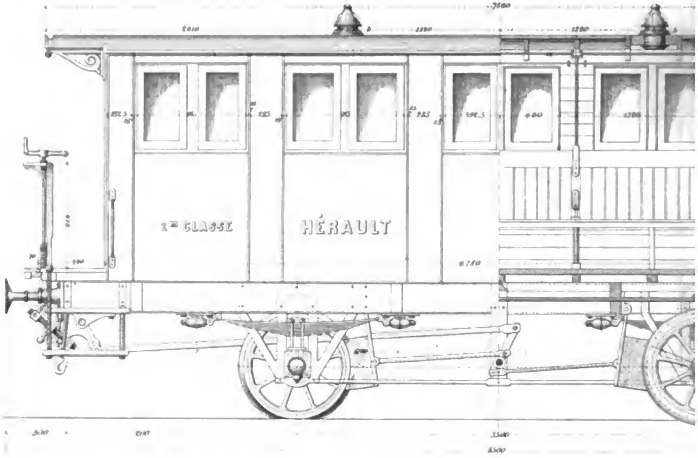


Fig 4 Grundriss des Gestelles

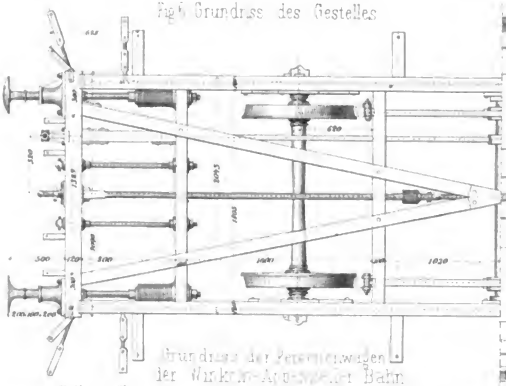
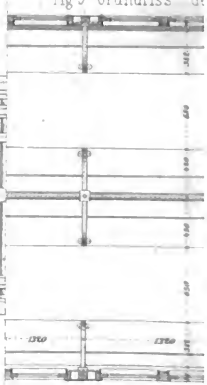


Fig 5 Grundriss d



Grundriss der Personenwagen der Winkler-Aussig'er Bahn.

Fig 7

III Cl. 21 Plätze

III Cl. 24 Plätze

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Langenschnitt

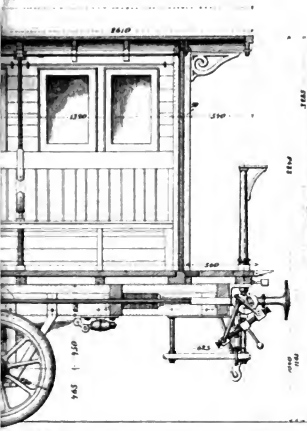
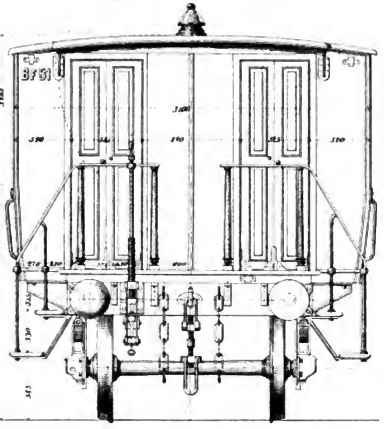


Fig 2 End-Ansicht.



Wagenkastens

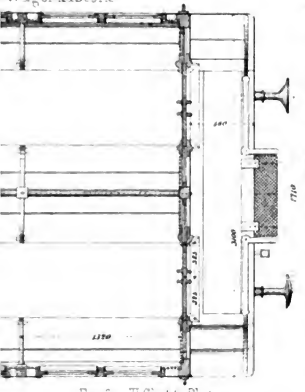


Fig 4 Querschnitt

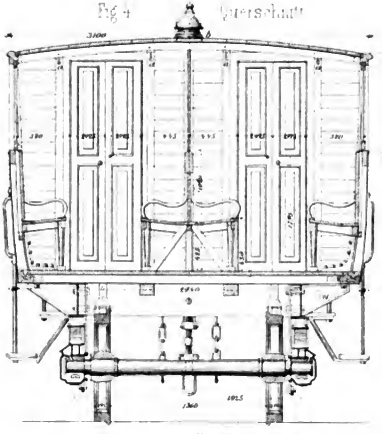


Fig 8 III Cl 48 Plätze

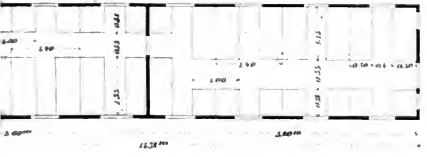
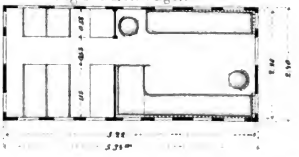


Fig 9 Salonwagen



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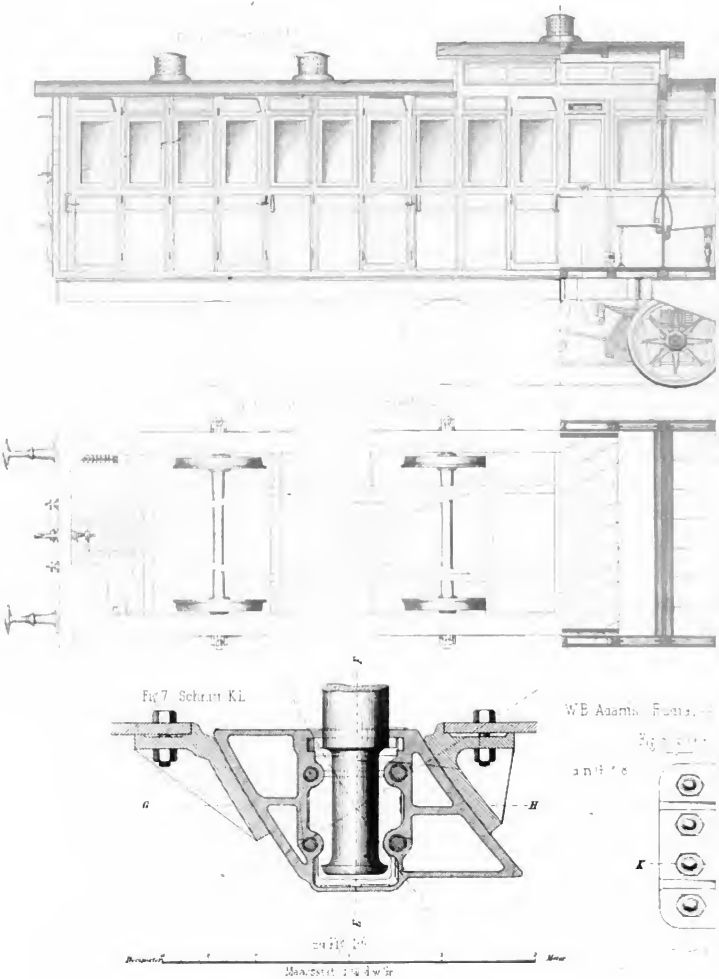

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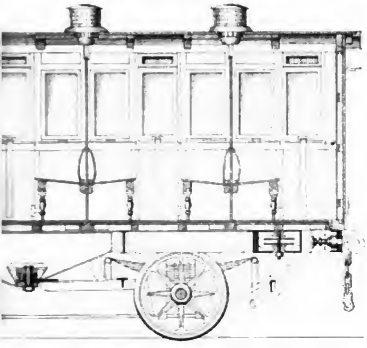
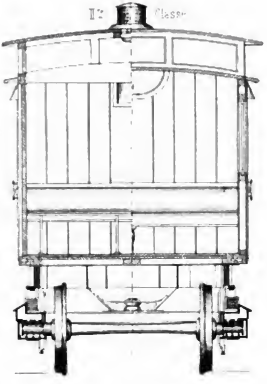


Fig 3 Querschnitt
II. Classe



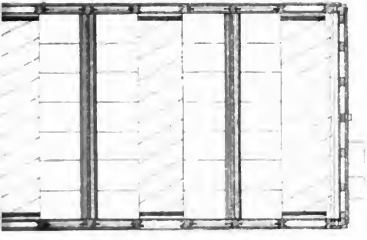
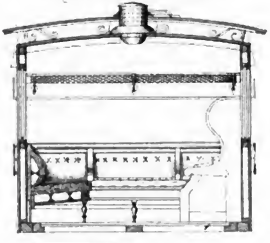


Fig 6 Querschnitt I. Classe



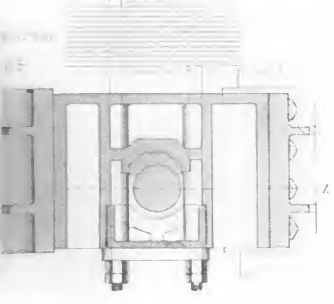
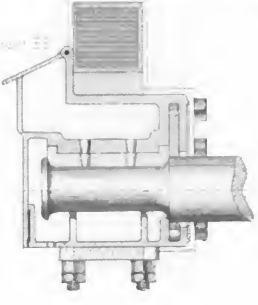


Fig 9 Schnitt



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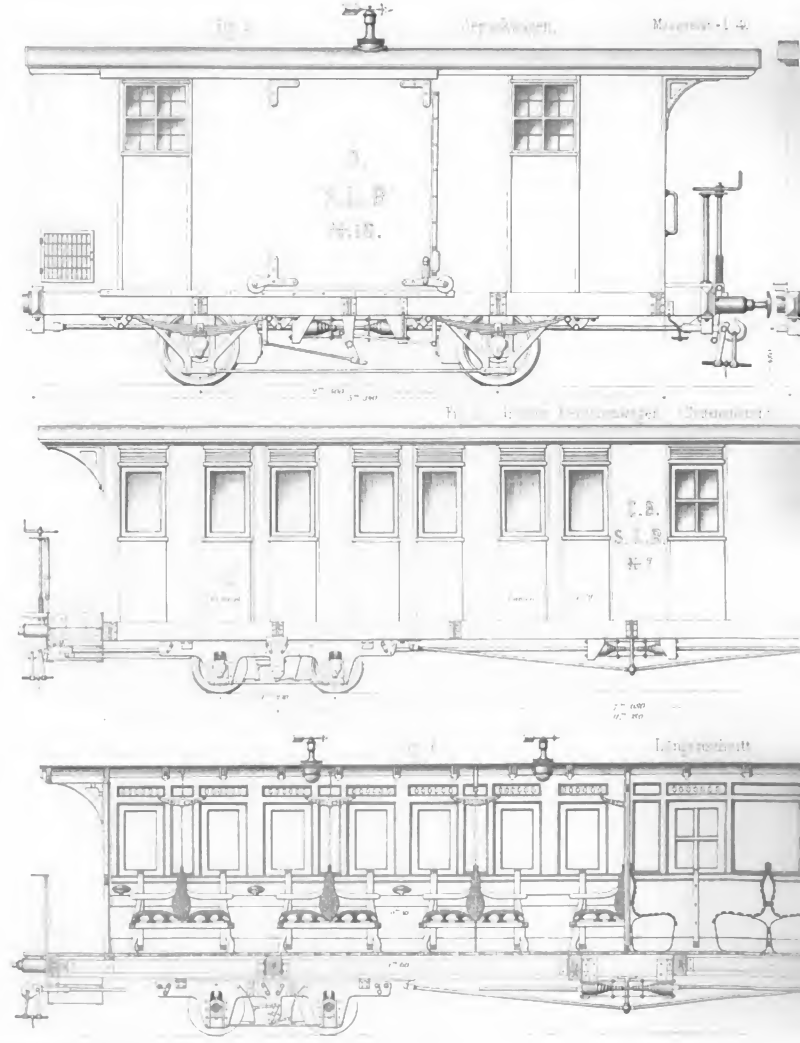

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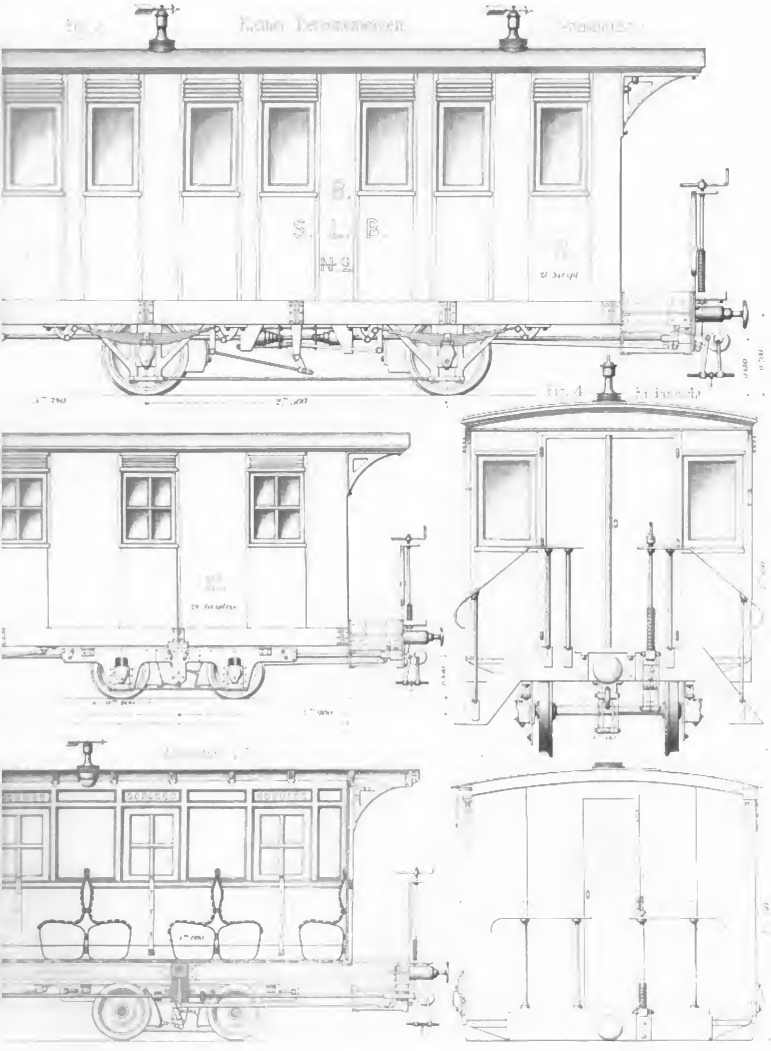

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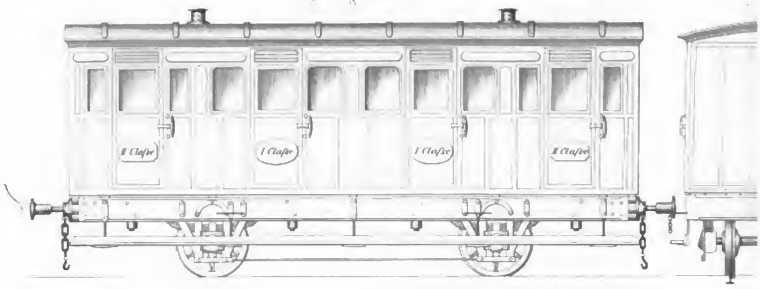
Personenwagen I und II Classe

Norwegisch

Fig 1 Längenansicht 1:50 d. w. Gr.



Personenwagen II. Classe der Broelthal-Bahn

Fig 5 Längenschnitt

Fig 6 Längenansicht 1:40 d. w. Gr.

Fig 7 Endan

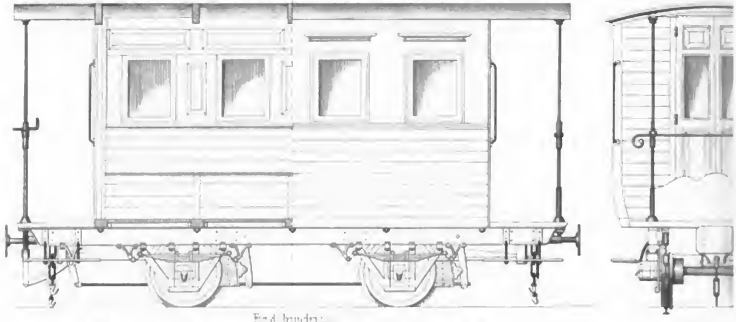
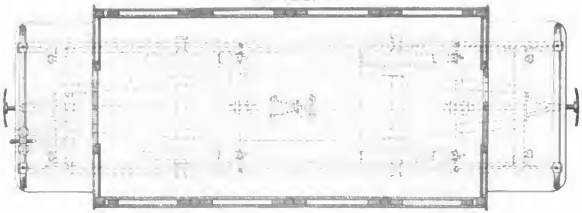
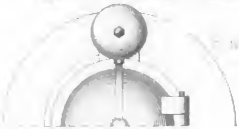


Fig 8 Grundriss





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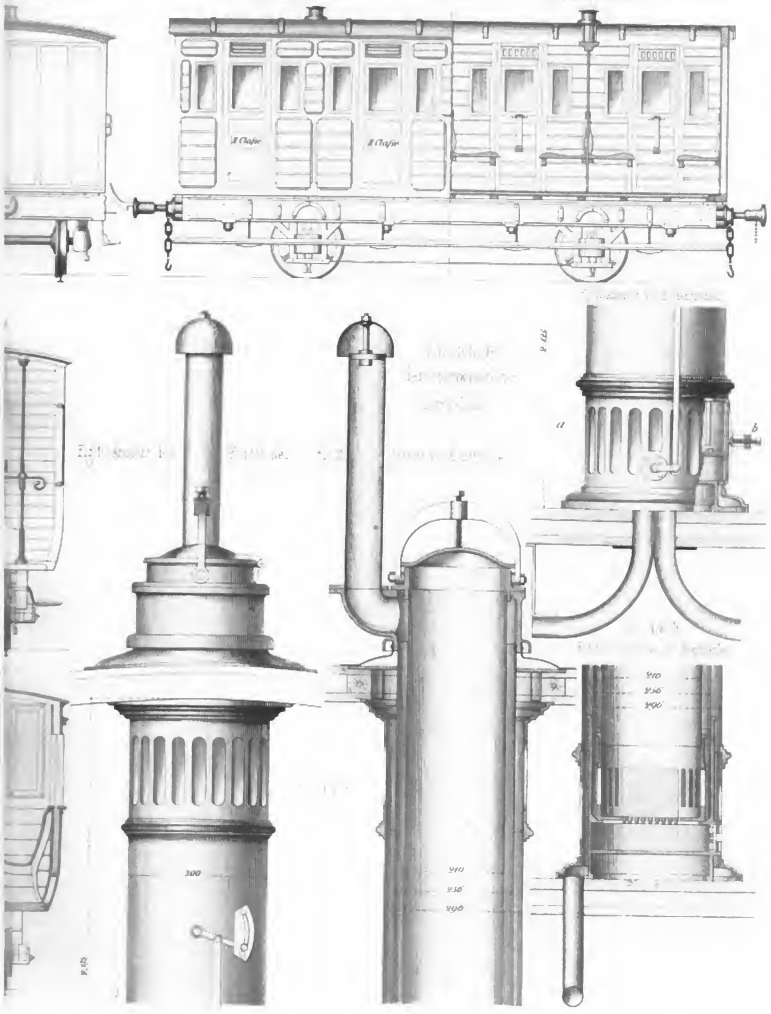

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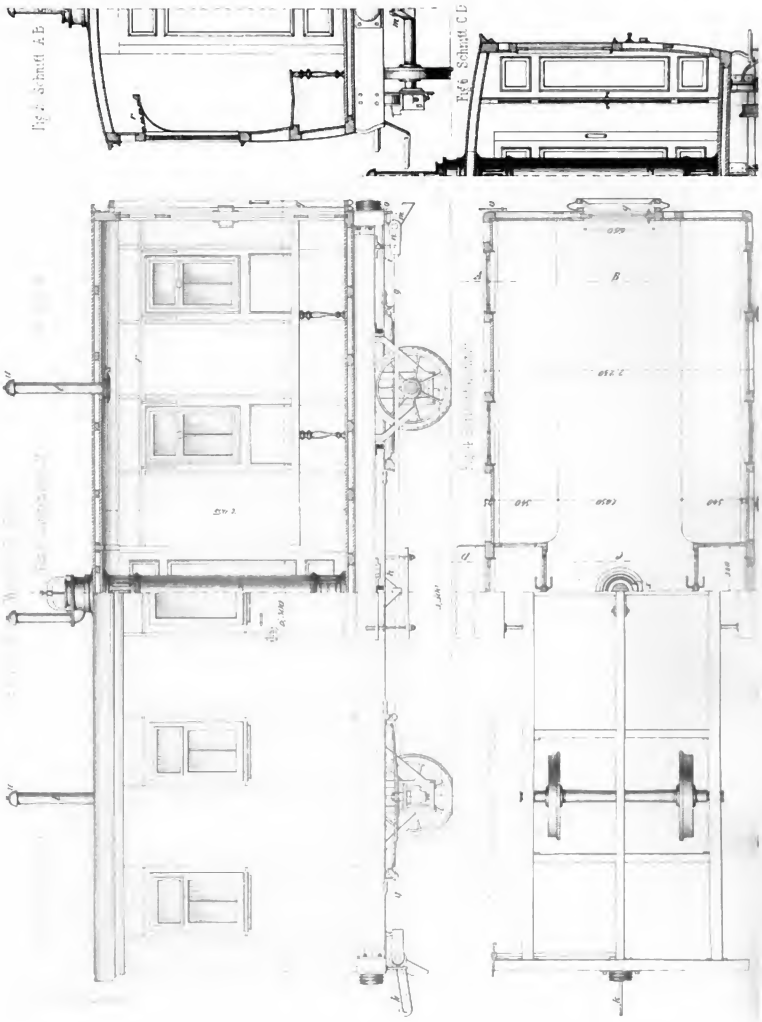

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Fig 1 Seitenansicht
Erzwagen mit schragem Boden

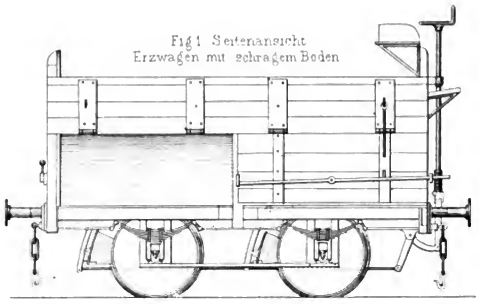


Fig 2 Endansicht

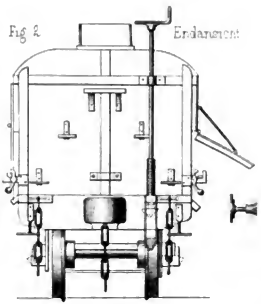


Fig 3 Untere Ansicht

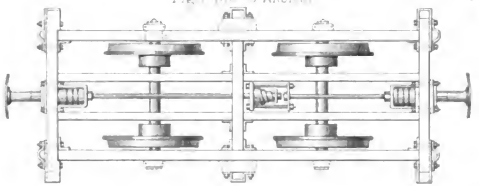


Fig 4 Querschnitt

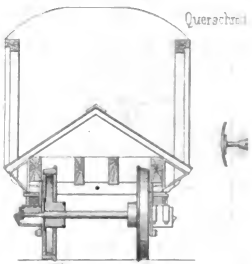


Fig 5 Seitenansicht
Plattformwagen

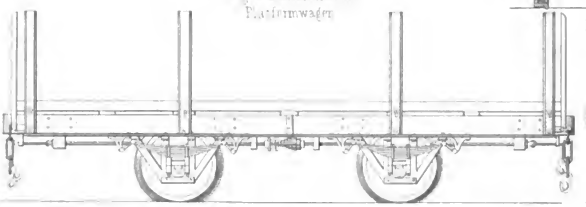
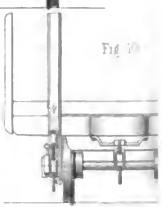


Fig 6



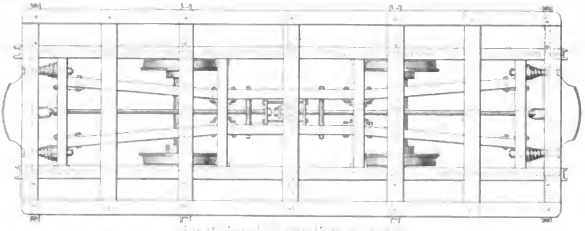


Fig 12 Querschn

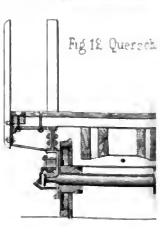


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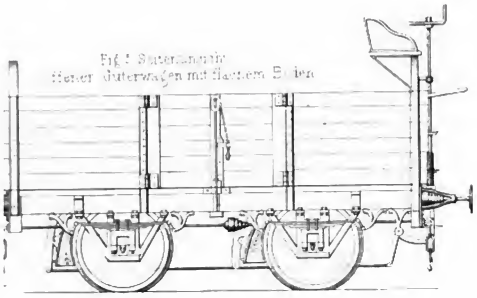
Fig 5 Seitenansicht
Ferner Güterwagen mit flachem Boden

Fig 6 Endansicht



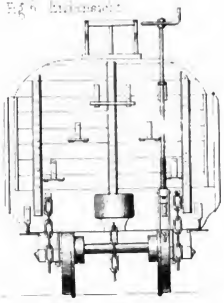


Fig 7 Untere Ansicht

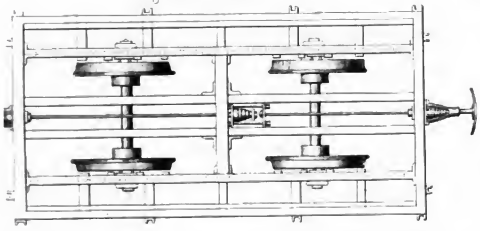


Fig 8 Querschnitt

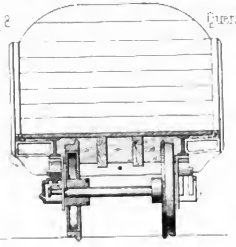


Fig 13 Seitenansicht

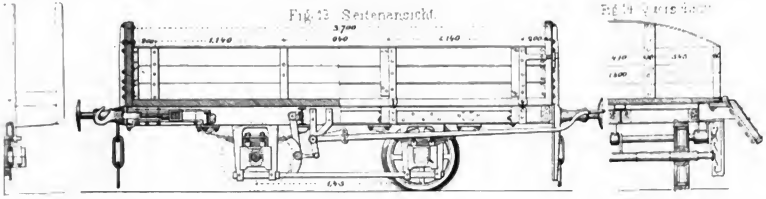


Fig 14 Querschnitt

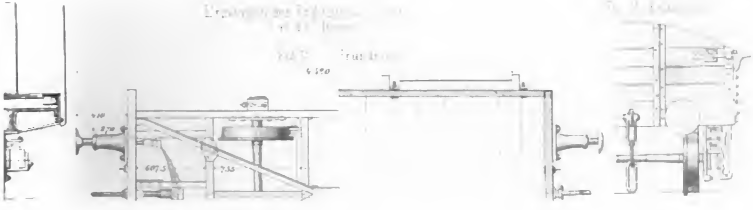


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Fig. 1 Holztransportwagen der norwegischen Schmalspur-Bahnen.

Fig. 2

Fig. 3

Fig. 4 Offener Güterwagen der norwegischen Schmalspur-Bahnen 1:50 d.nat. Gr.

Fig. 5

Fig. 6

Fig. 7 Maassstab 1:50 d.nat. Gr.

Fig. 8

Fig. 9

Fig. 10

Fig. 11

Fig. 12 Dachgewagen der norwegischen Schmalspur-Bahnen

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Güterwagen der kaiserl

Offener Güterwagen mit vollen Wandungen 1.40 dwGr

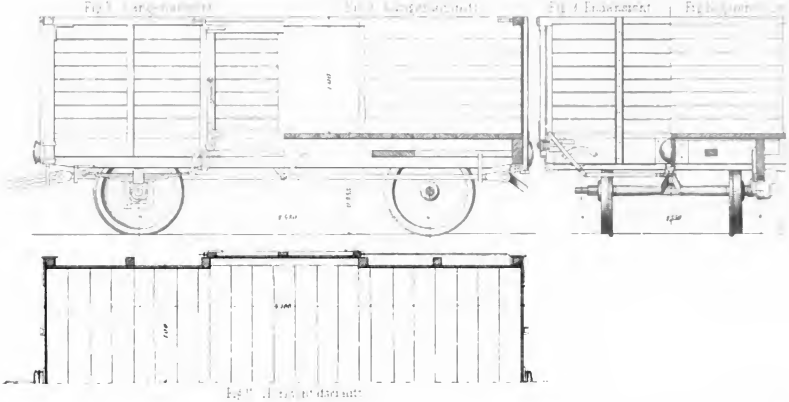

Fig. 17. Horizontalschnitt

Bedeckter Güterwagen 1.40 dwGr

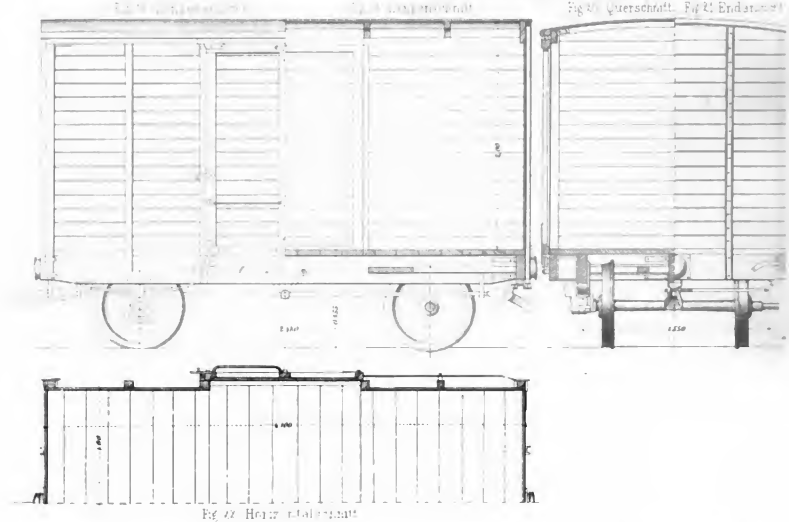

Fig. 22. Horizontalschnitt

Lith. Anst. v. F. Wirtz, Darmstadt

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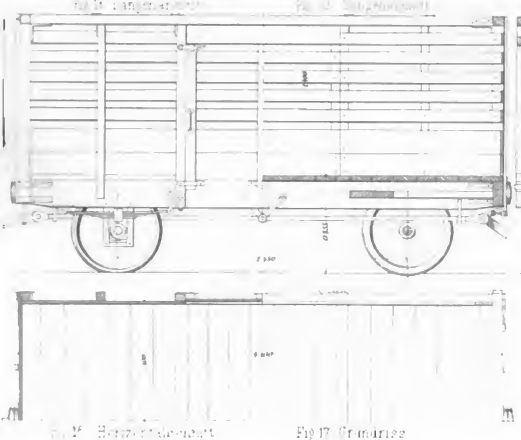
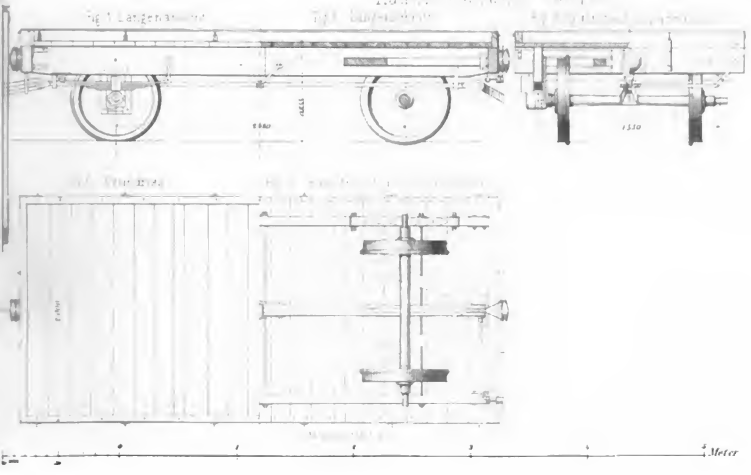


Fig 17 Grundriss



Meter

Digitized by Google

Digitized by Google

Gepäck-und bedeckte Güterwa

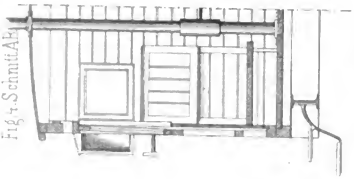


Fig 4 Schnitt AB

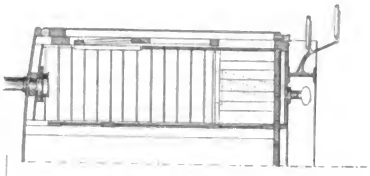


Fig 5 Schnitt CD

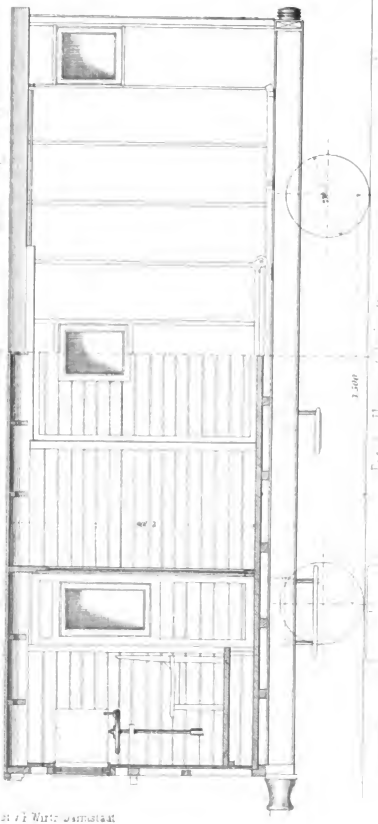


Fig 1 Langenschnitt Gepäckwagen Fig 2 Querschnitt

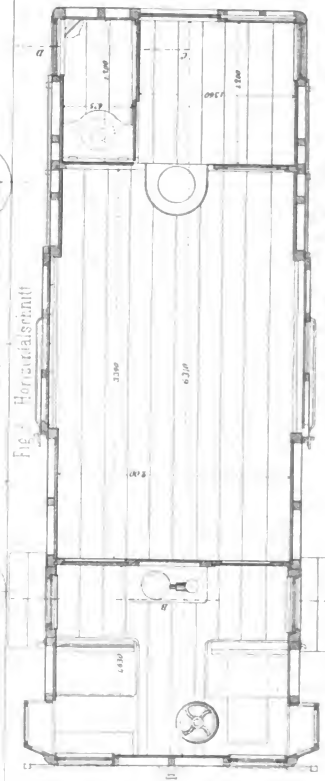


Fig 3 Horizontalschnitt

Bedeckter Güterwagen mit Bremse

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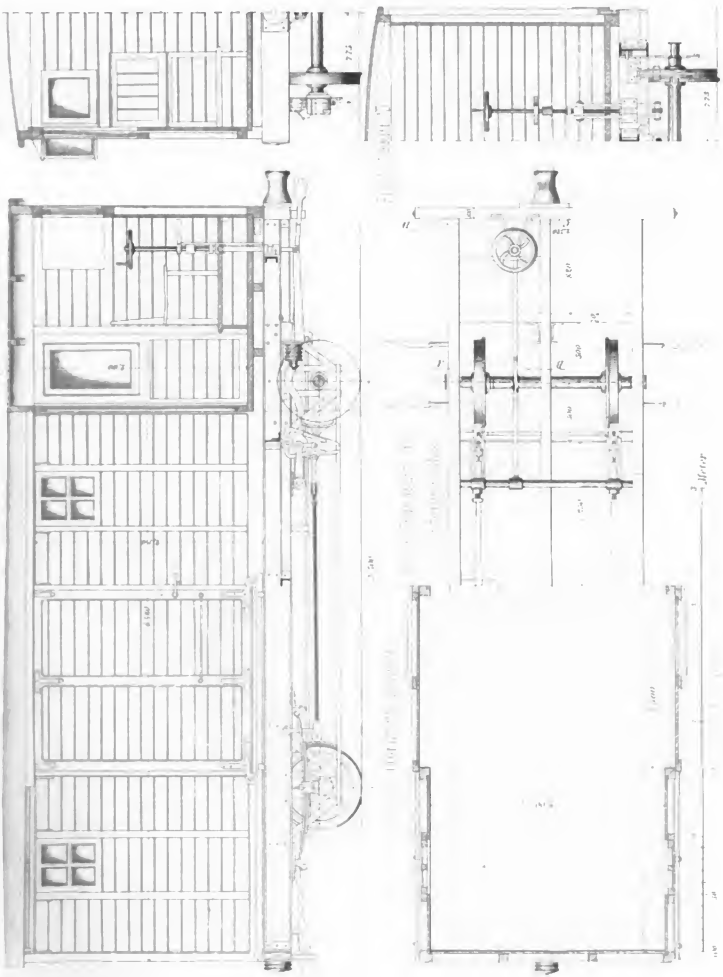

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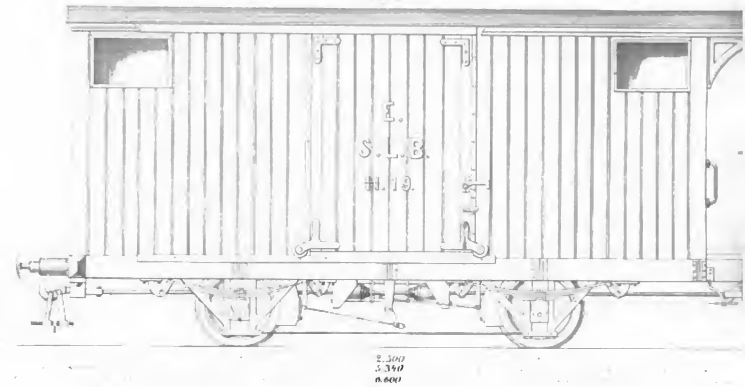

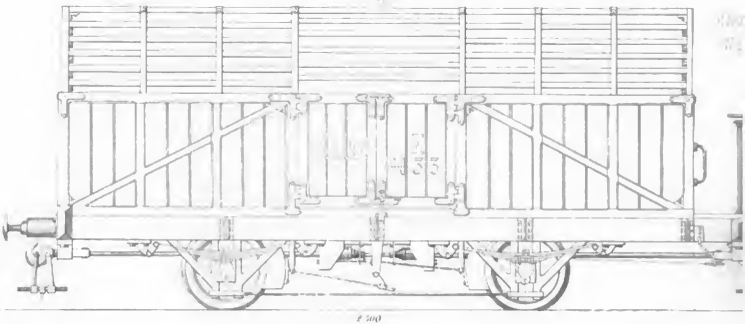

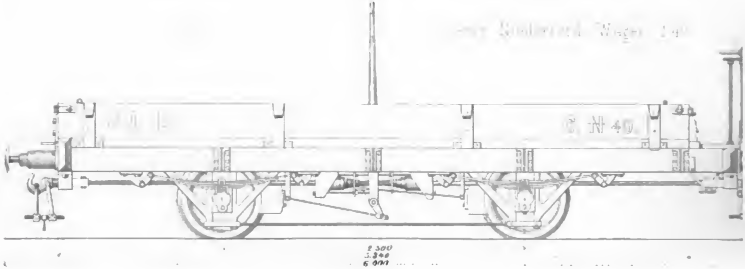

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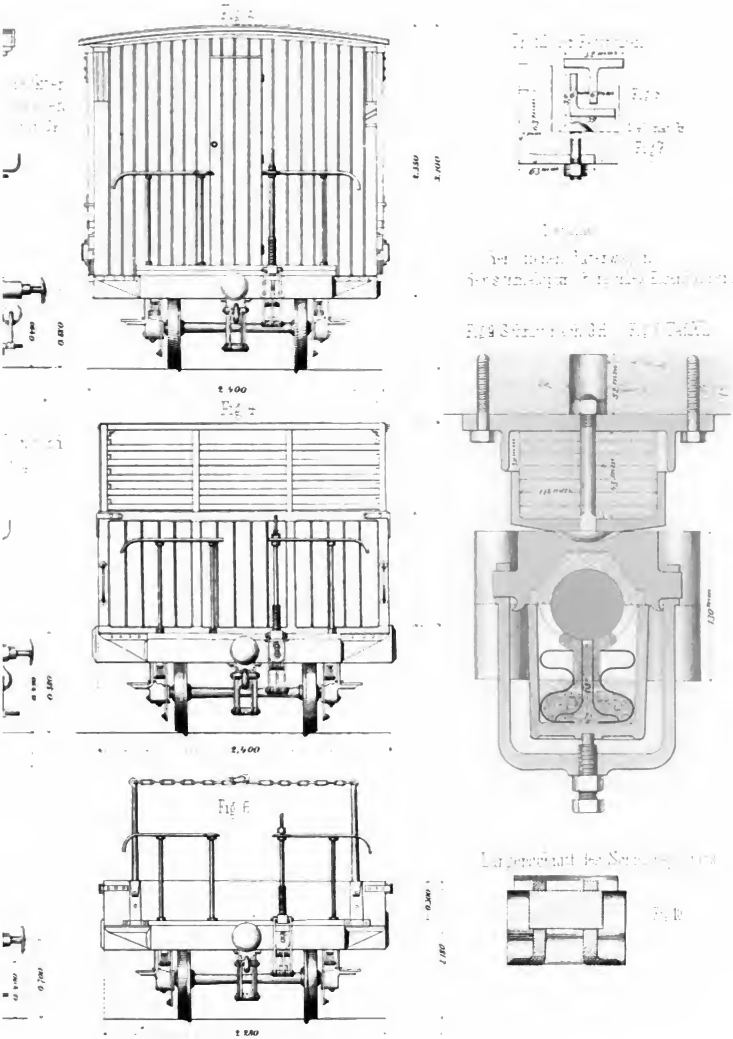

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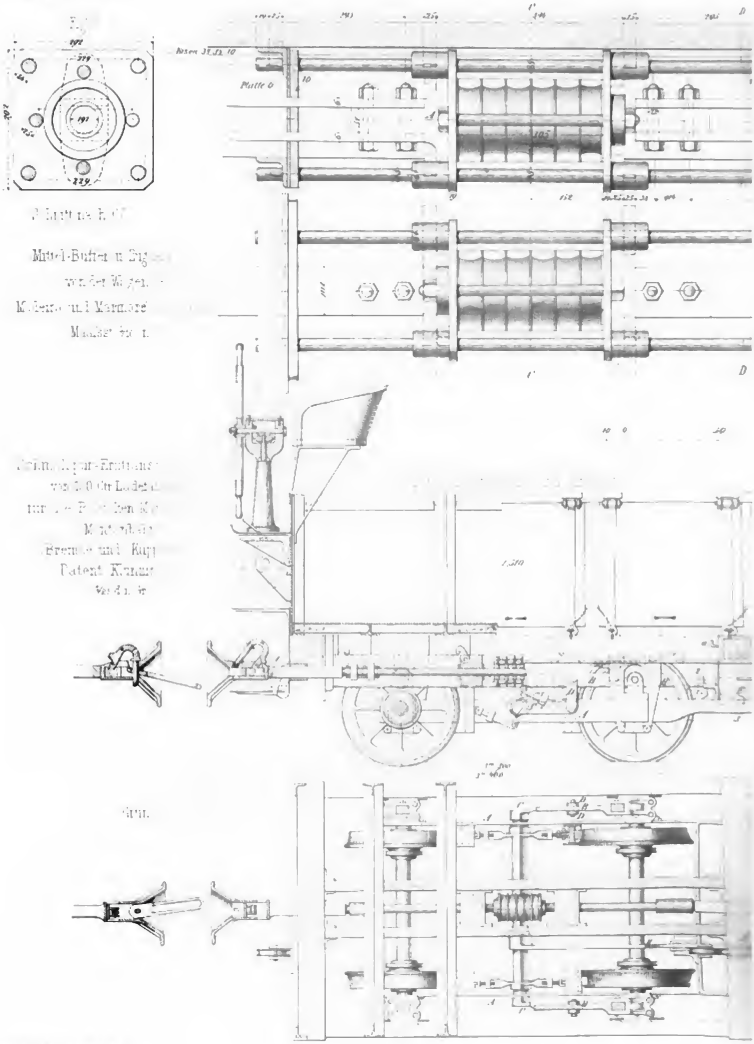

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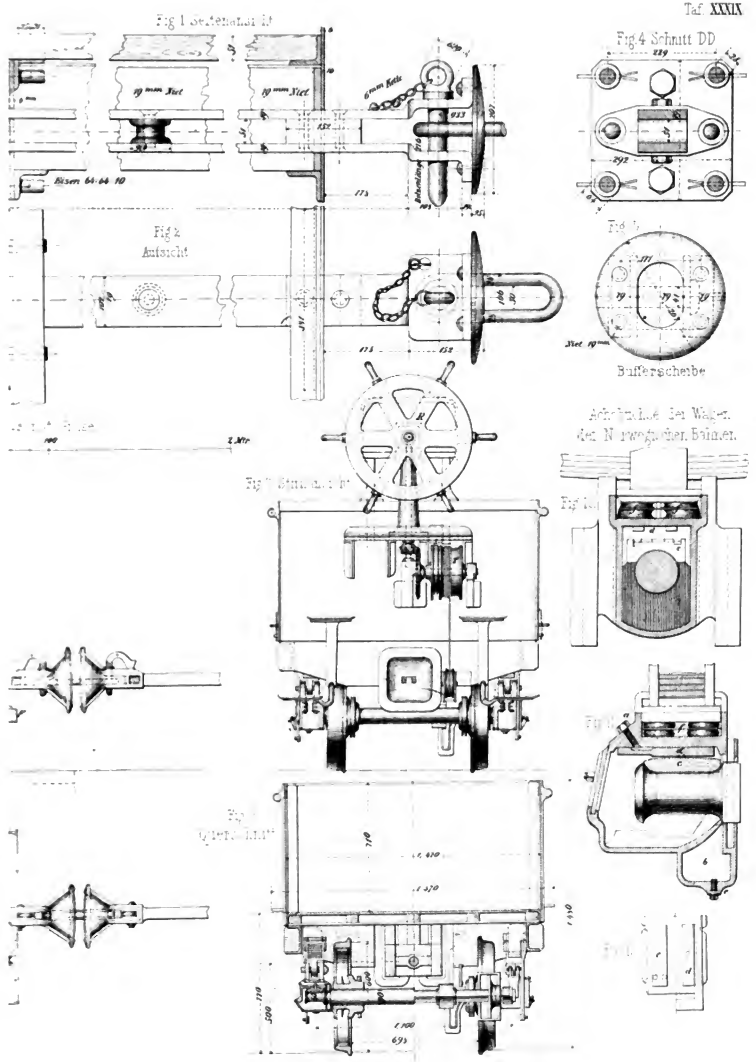

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Fig 1 Endansicht.

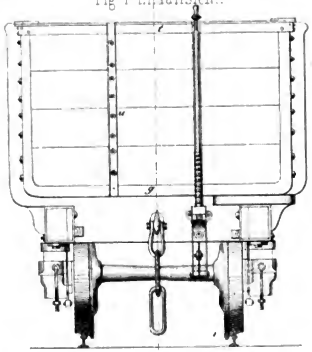


Fig 2 Seitenansicht

Fig 3. Längenschnitt

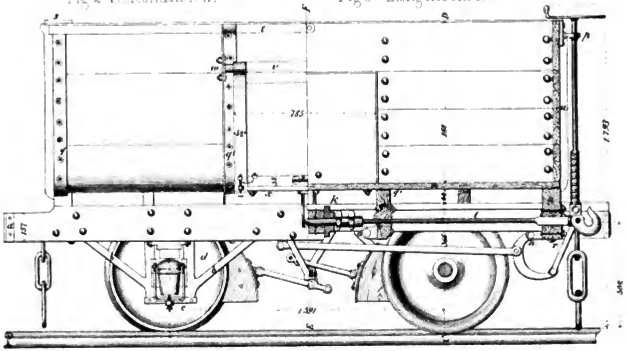
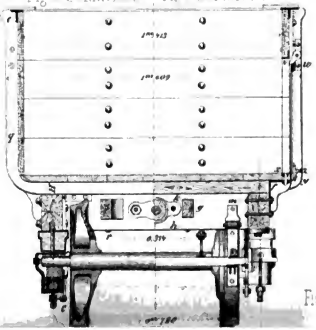


Fig 6 Schnitt CD · Fig 7 Schnitt FF



Erz-und Kohlenwagen der schmalspur. Oberschles Eisenbahn

Fig 4 Grundriss

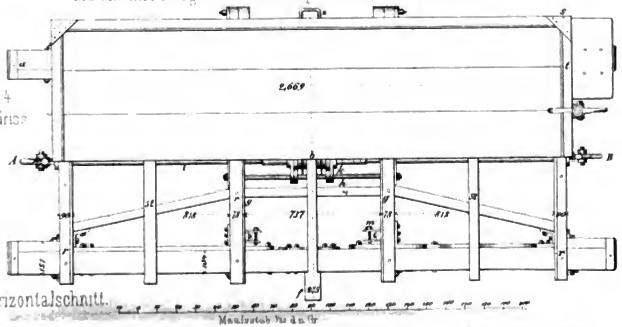


Fig 5 Horizontalschnitt.

Maaßstab 1/10 d. n. Gr.

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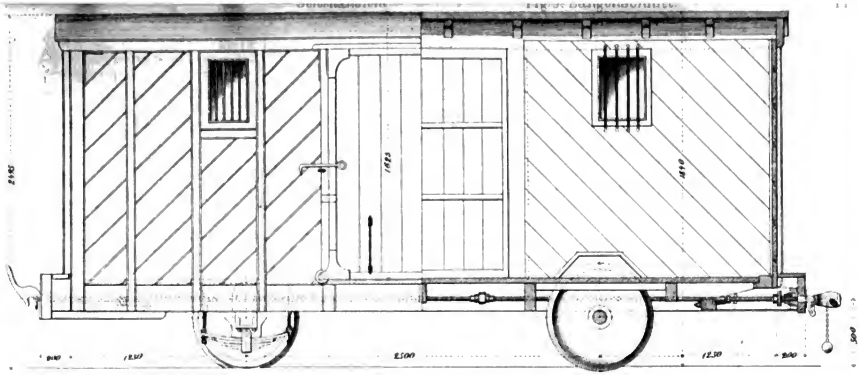

Bedeckter Güterwagen der Ochelt-Westersteder Eisenbahn 1/30 d. n. Gr.

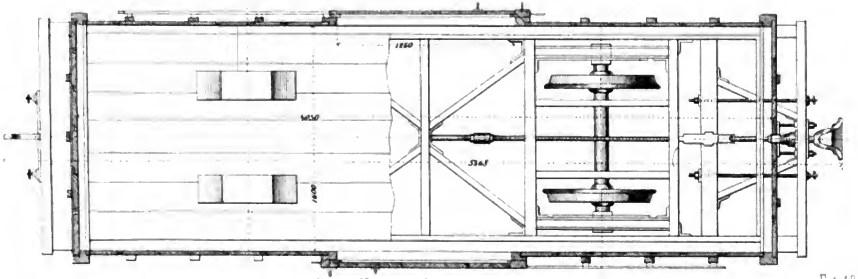

Fig. 11. Horizontalschnitt

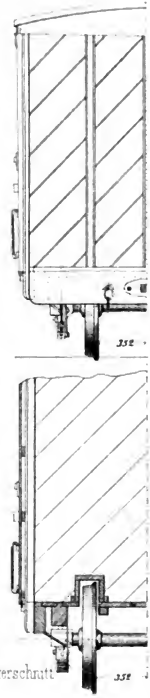

Fig. 12. Querschnitt

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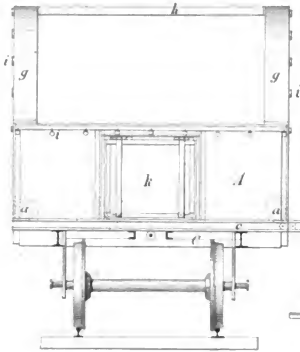
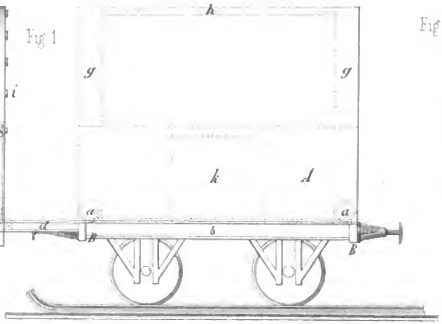
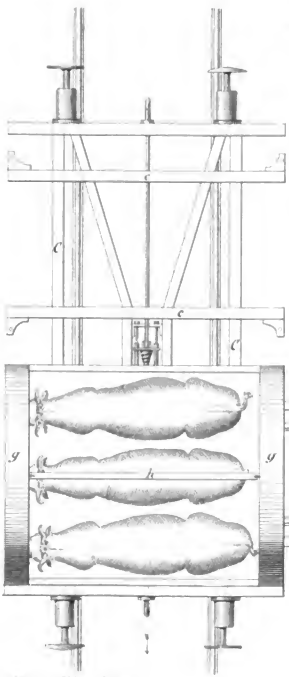
Fig 1

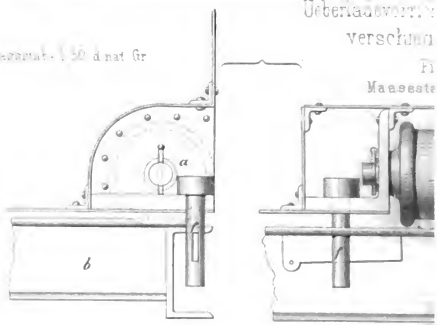
Fig 3



Ueberladevorr...
verschied...



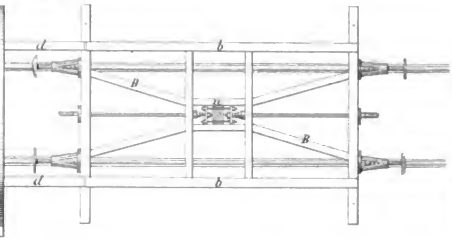




Maassstab 1:50 d nat Gr

Fi...
Maasesta...

Fig 2



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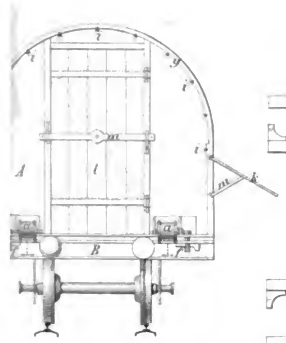
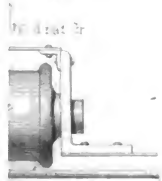




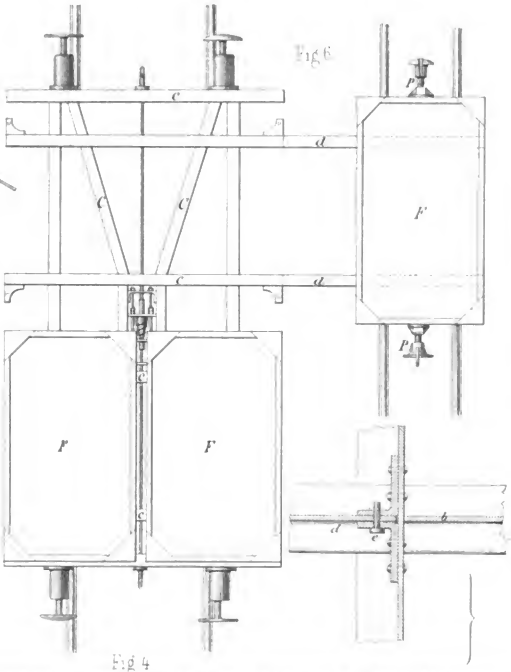


Fig 6

Fig 4

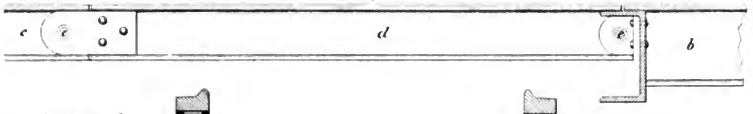
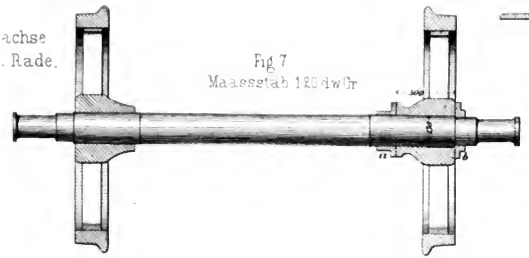


Fig 7
Maassstab 1/20 d.w.Gr.



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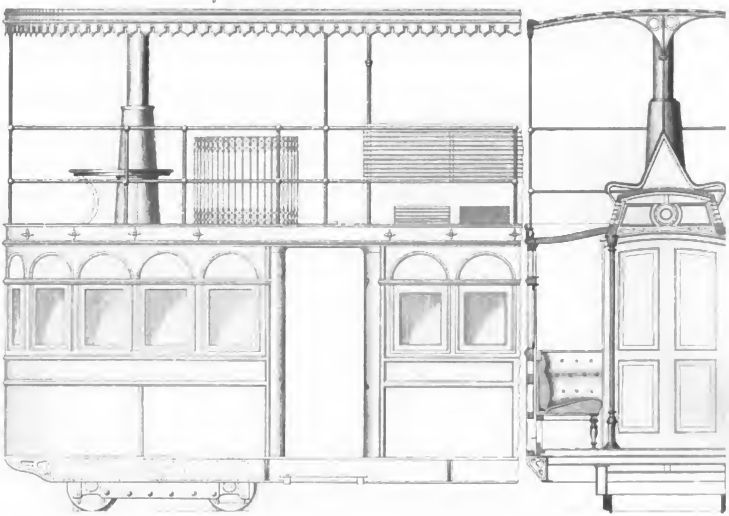
Dampfomnibus

gebaut in der Lokom
Straßenbahn

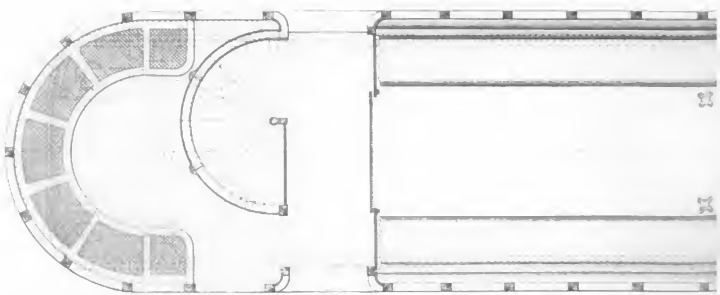
Fig 1. Seitenansicht

Fig 3. Querschnitt



Maaßstab 1 40 d nat Gr

Fig 2



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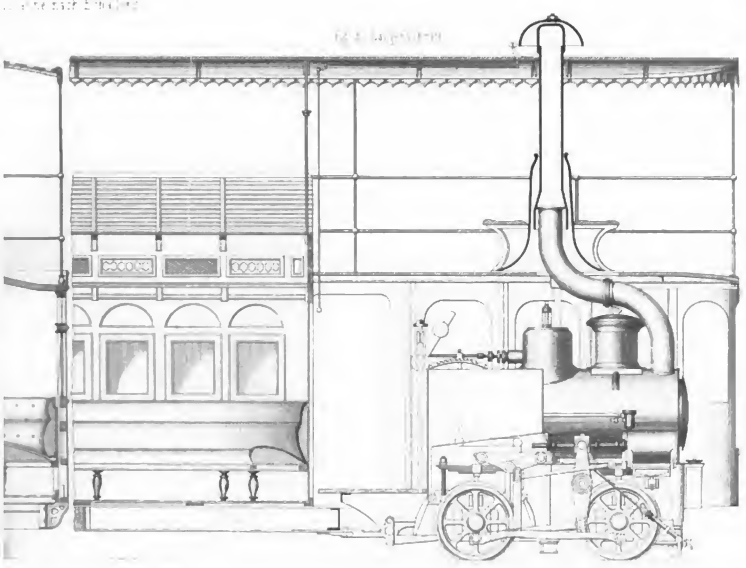
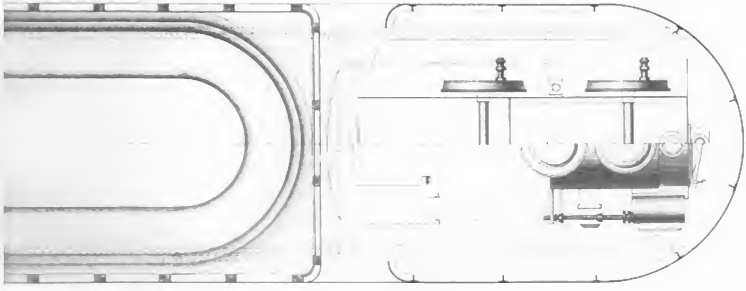
Patent Brunner)

Taf. XLII





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Oberbau-Constructionen

N e w - G l a s g

6te Avenue-Bahn
33,85 Klg.

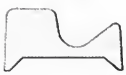


Fig. 1

New-York-Harlem-Bahn.
41,12 Klg.

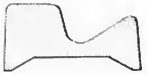


Fig. 2

3te Avenue-Bahn.
43,83 Klg.

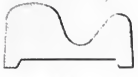
Fig. 3

Londen
Fig. 4 [illegible]

Nase
24,[illegible] Klg.

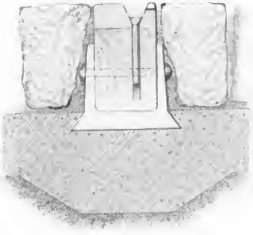
7½ Klg.

Pendleton
Fig. 12 [illegible] Klg.



Birkenhead
Fig. 13 22,85 Klg.

Southport
Fig. 14 [illegible] Klg.



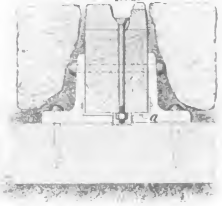
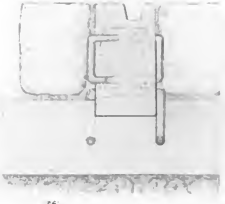
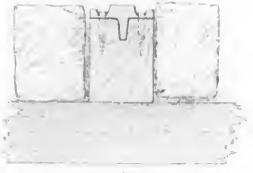
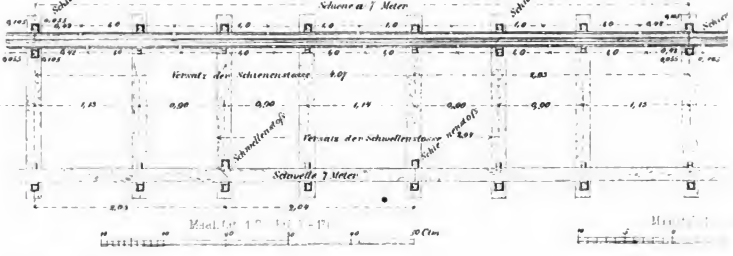


Fig. 18

Schienenstoß
Schiene a 7 Meter
Schwellenstoß
Versatz der Schienenstoße 4,07
Schwellenstoß
Versatz der Schwellenstoße 2,04
Schwelle 7 Meter
Maaßstab 1:[illegible] Fig. 1 - 17
10 Ctm







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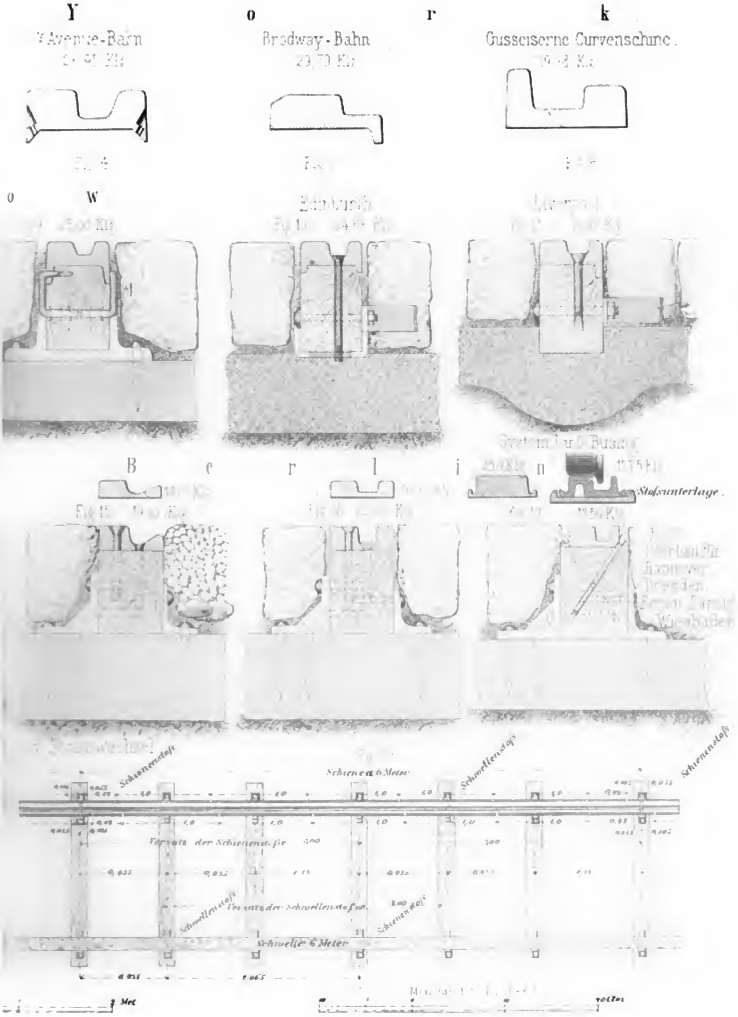

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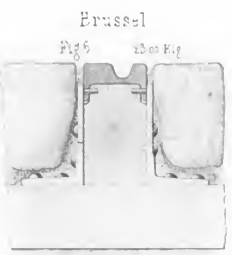

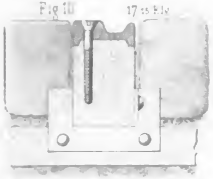

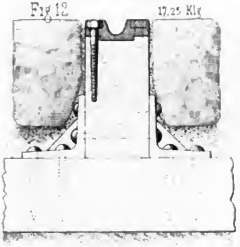

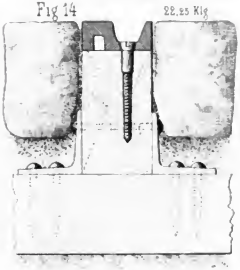

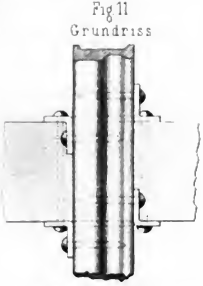

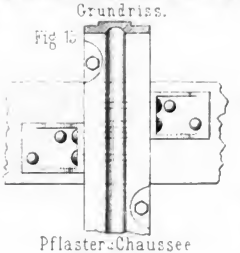

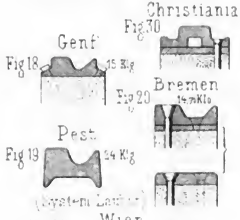

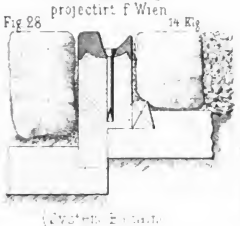

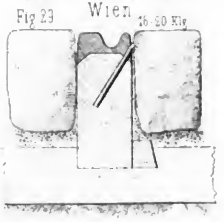

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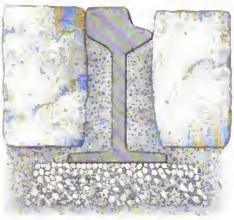
Philadelphia
System Beer.

Fig 1 35,5 Klo



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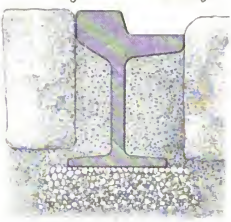
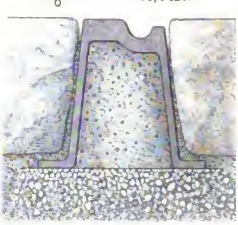


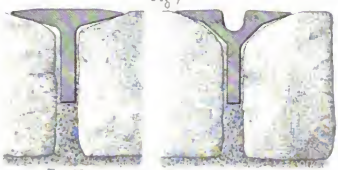
Edinburgh.
System Th. Scott

Fig 3 35,0 Klo.



System R Paulus

Fig 7



System Kostlin u Battig

Fig 8 35,0 Klg

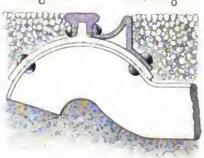
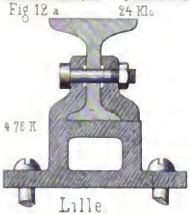
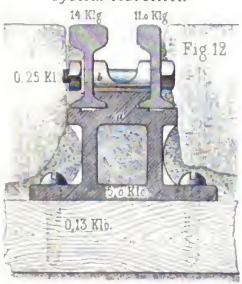


Fig. 9

Fig 12 a 24 Klo.

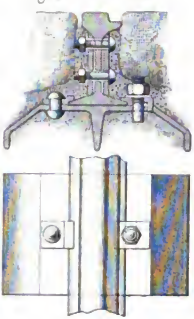


Lille
System Marsillon



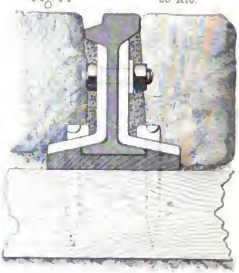
Metz
System de Férral

Fig 13 1 7½



Antwerpen.
System Dufrane.

Fig 14 23 Klo.



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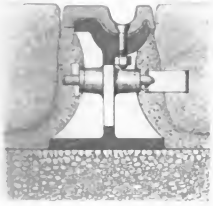
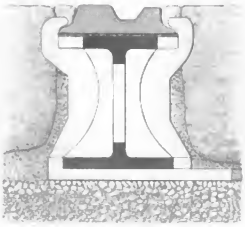
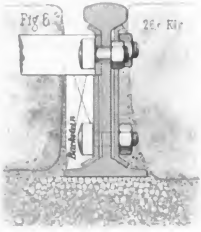
Bombay
System Croß u Larsen
Fig 4 35,5 Klo



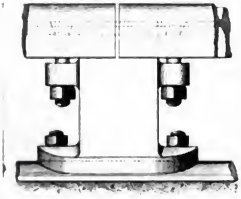
Madras
System Dawson
Fig 5 40.0 Klo.



Stuttgart
System Hartwich
Fig 6 26.0 Klg



B u e n o s A y r e s
System Livesey
(Fig 10 u 11 Stadtbahn)
Fig 10 Stossbock



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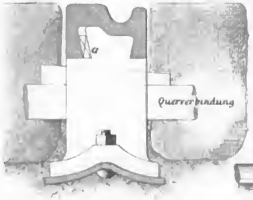
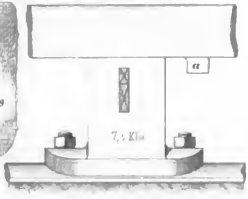
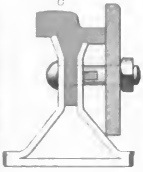


Fig 11 Mittelbock



...sseldorf
...m Dufrane
5 23.0 Klg

Fig 16



System de Leye
Fig 17 19,5 Klg

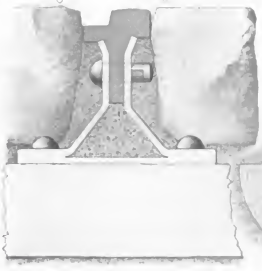
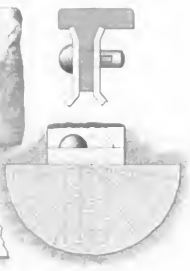


Fig 18



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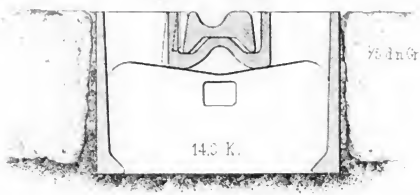

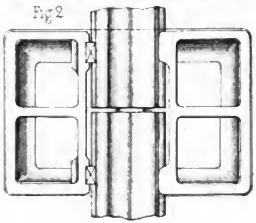

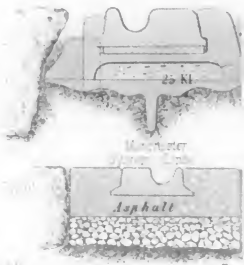

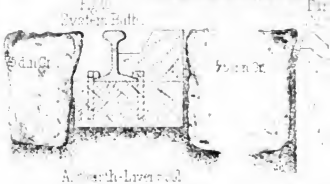

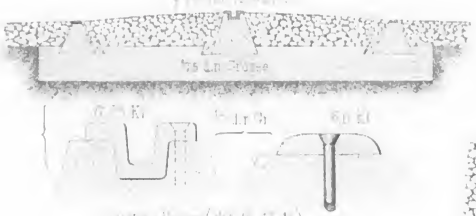

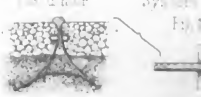

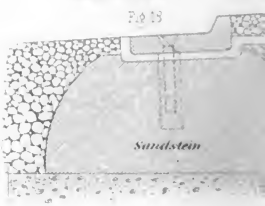

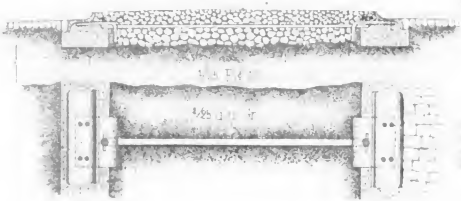

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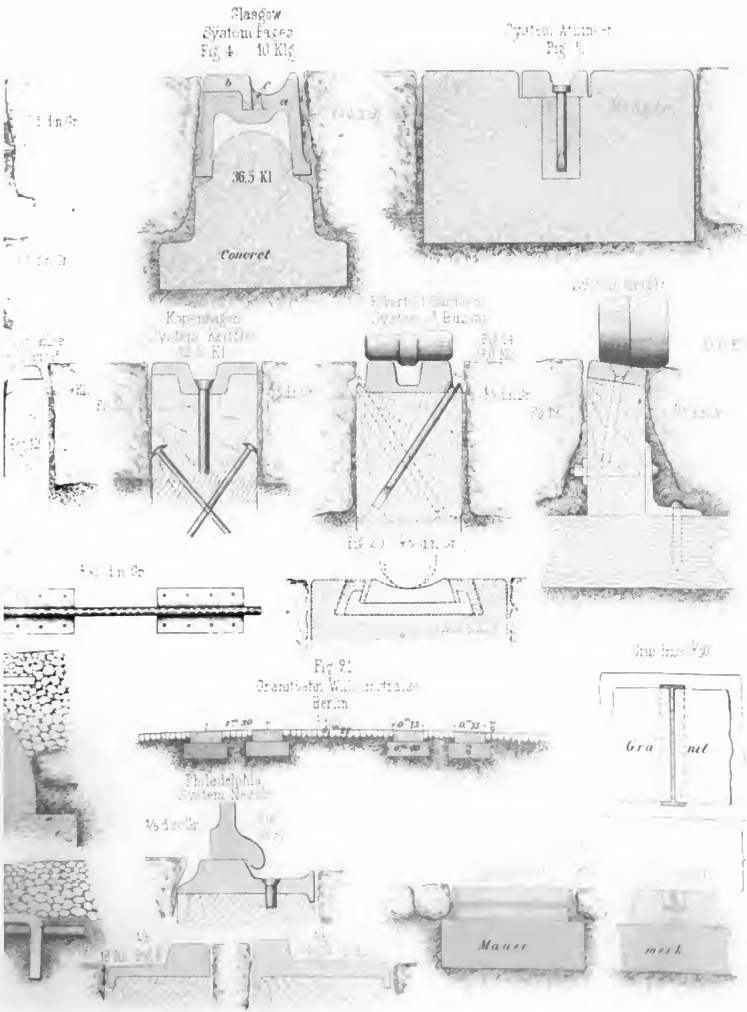

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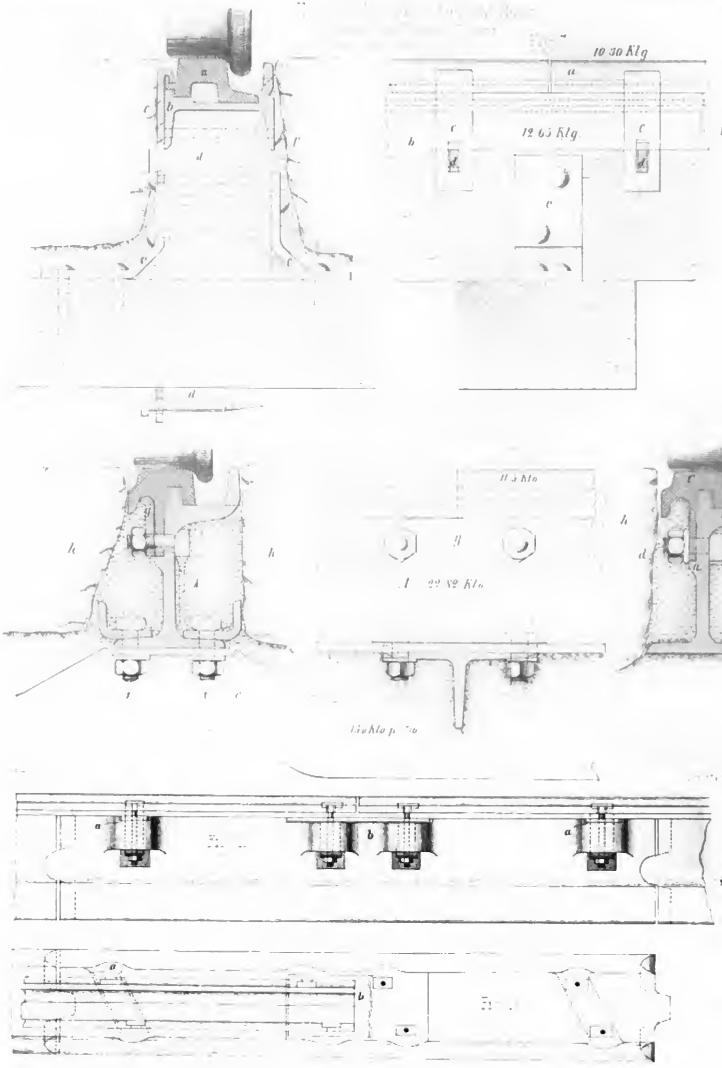

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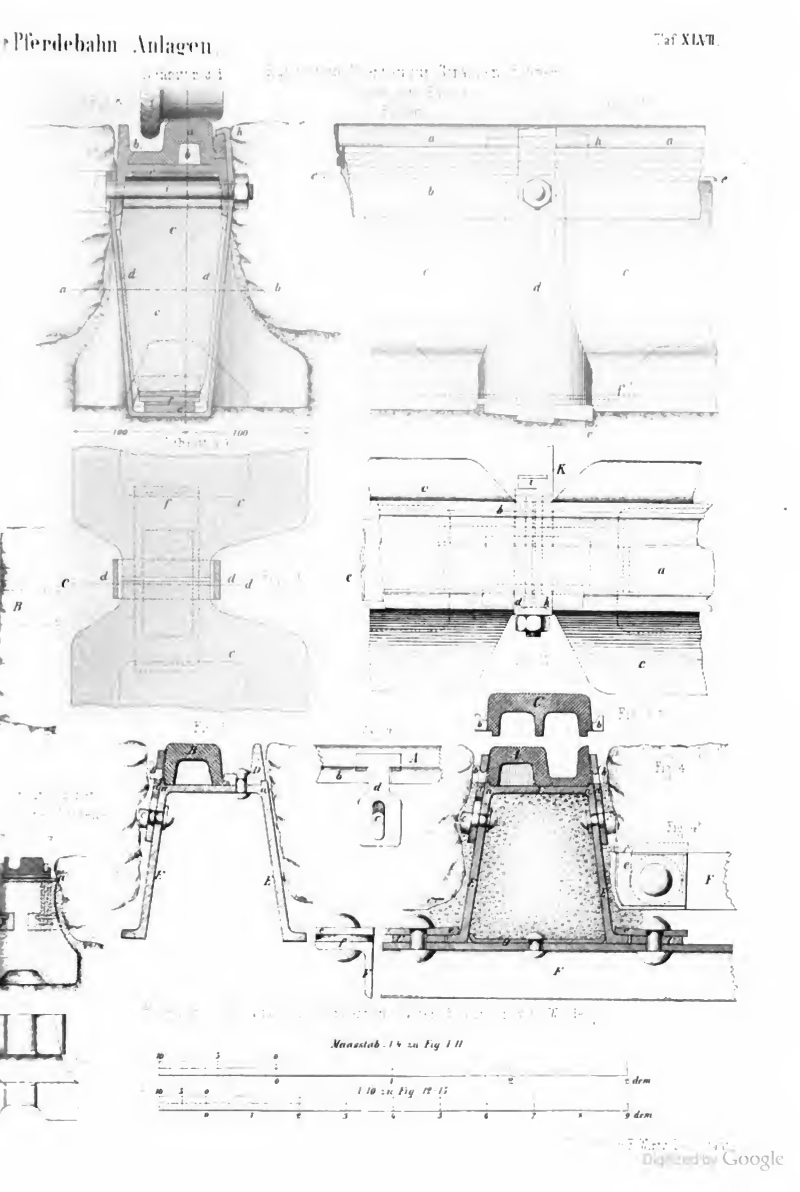

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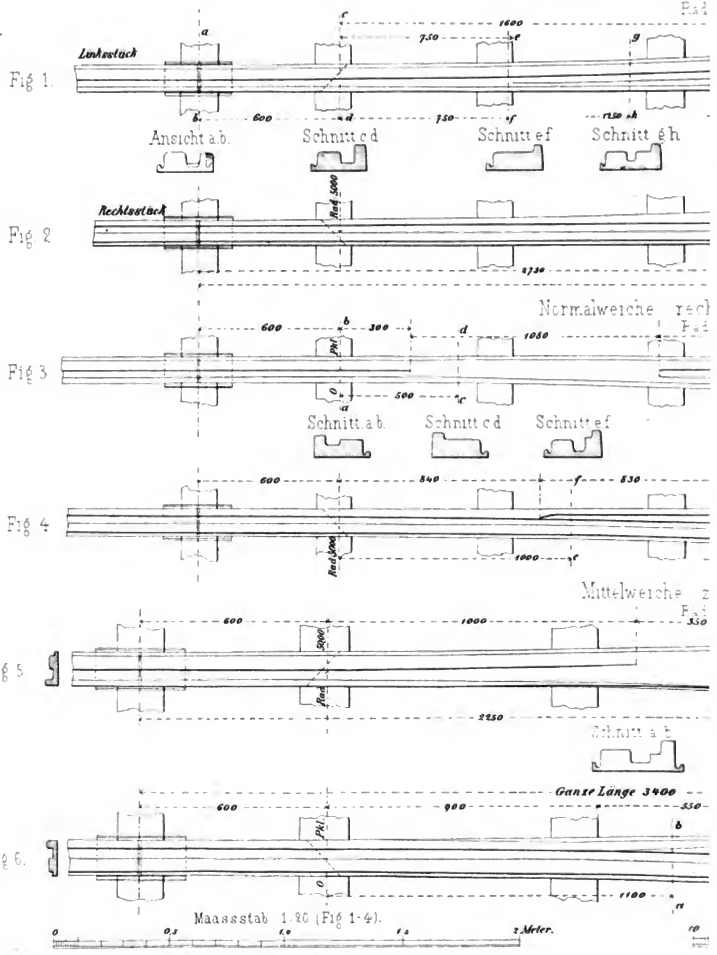

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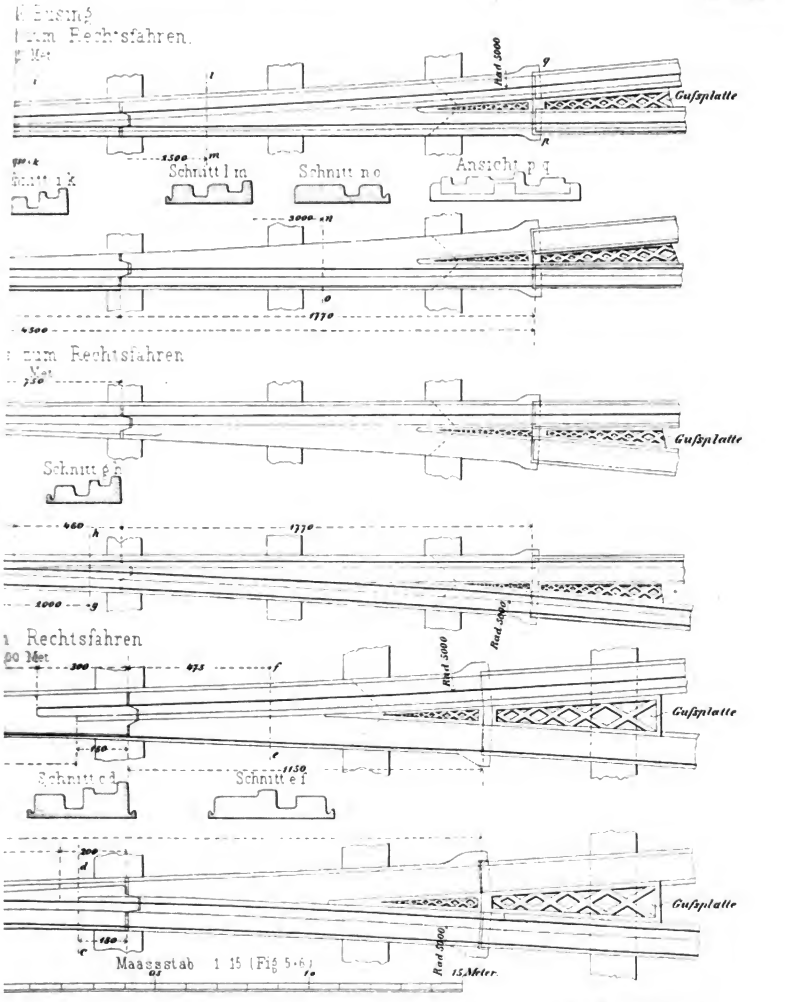

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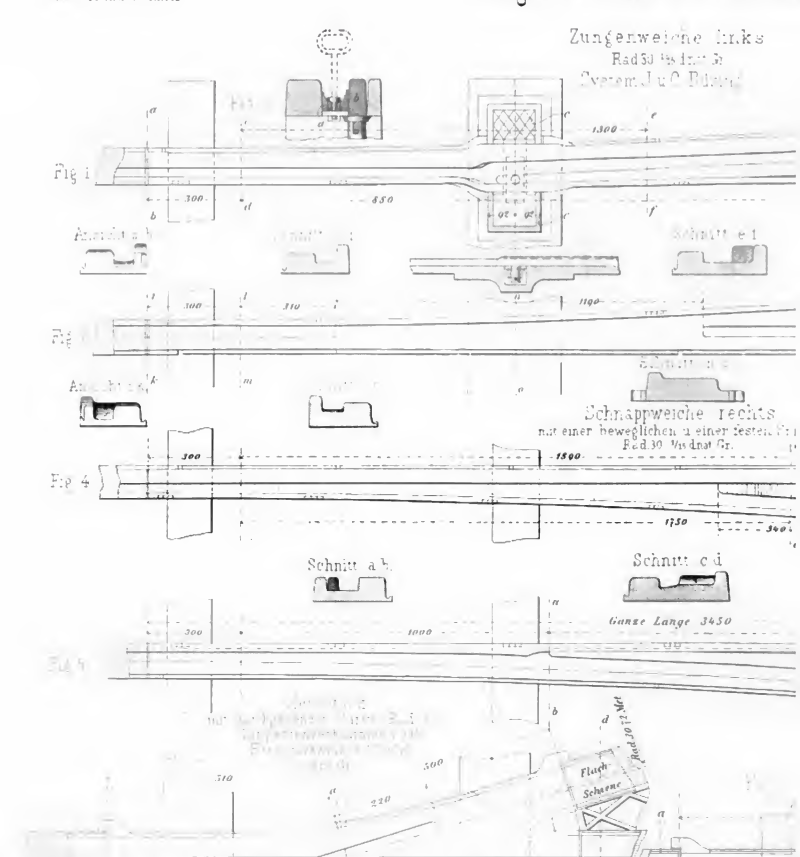
Zungen, Weichen und Herzstü



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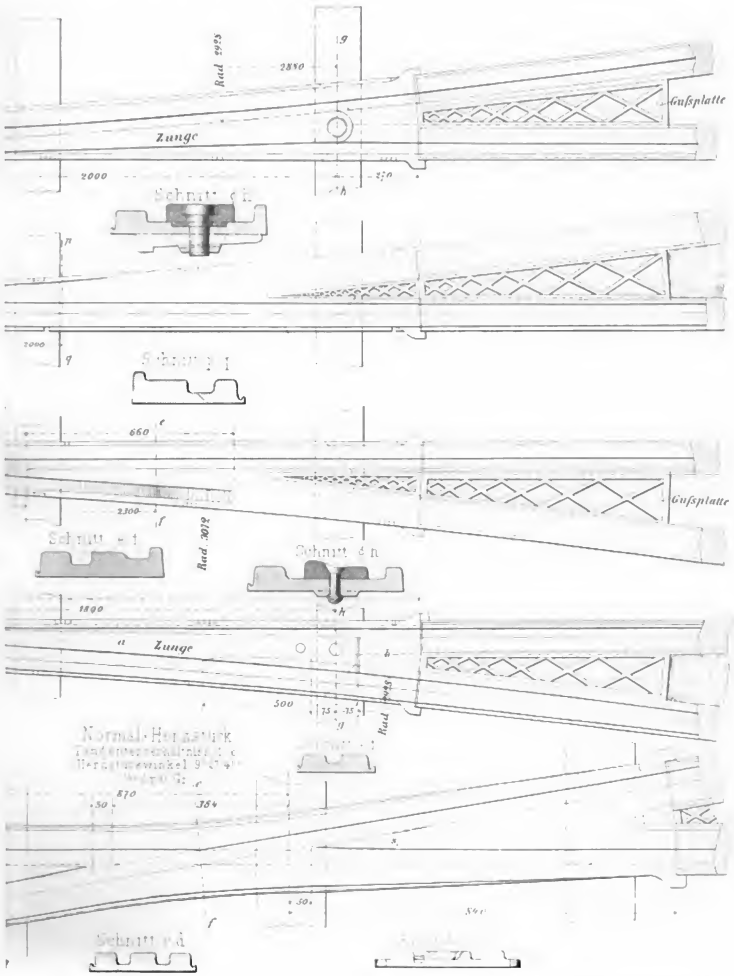

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Ausweichungen für

Herzstückwin

Fig 1.

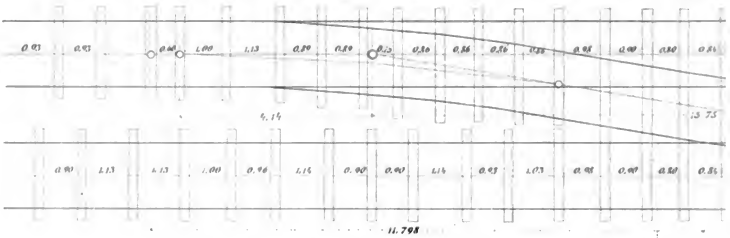


Fig 2

Doppel Zungen A

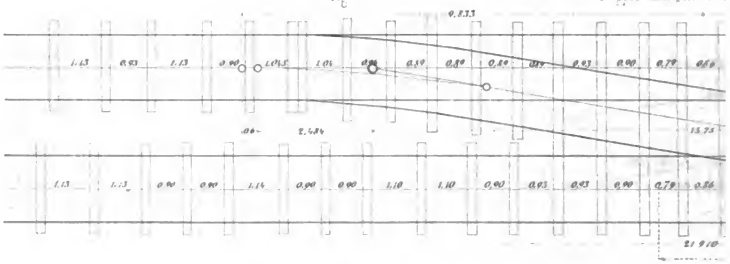
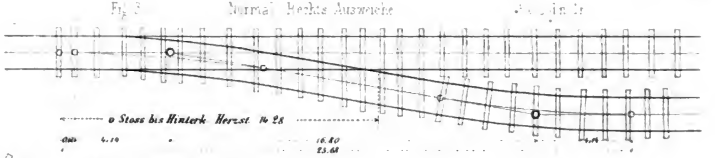


Fig 3

Normal Rechts Ausweiche



Zungen Ausweiche rechts R = 30m

Fig 7

Von Hinterkante Herzstk 6.7 Stoss

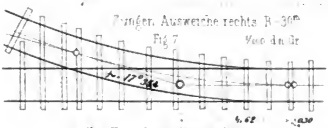
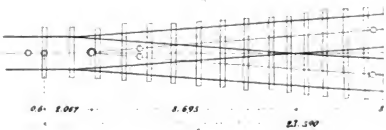
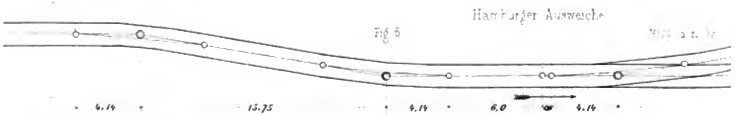


Fig 5



Hamburger Ausweiche

Fig 6



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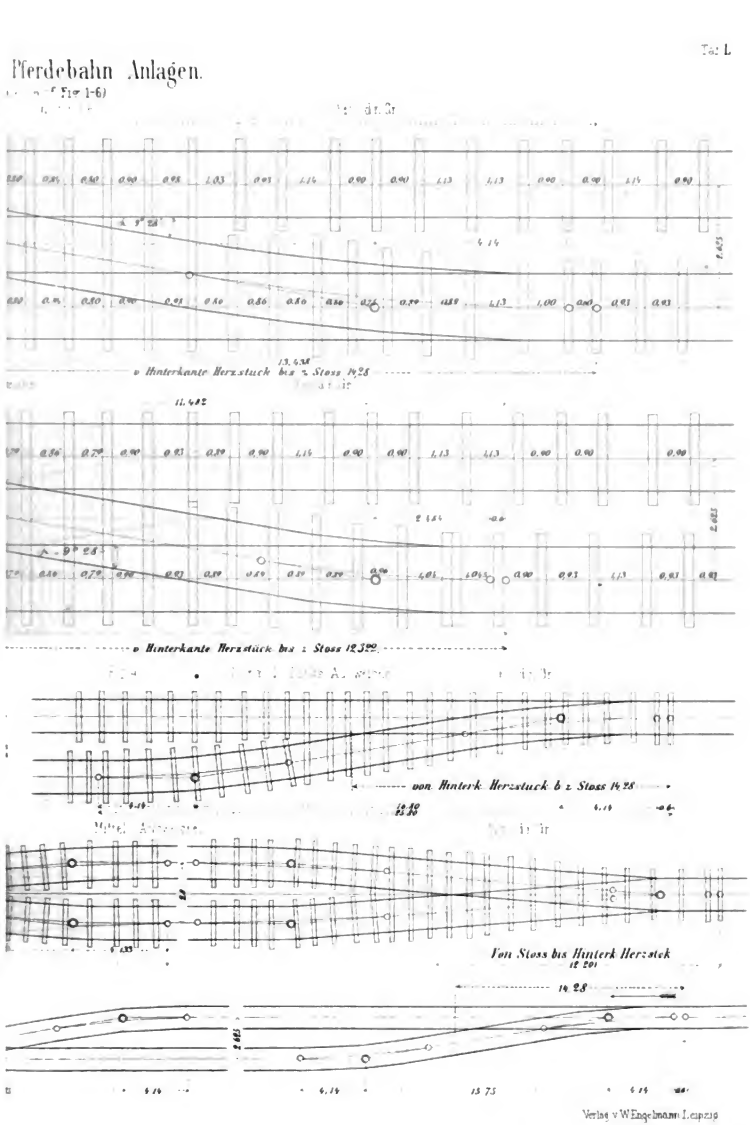
Pferdebahn Anlagen.



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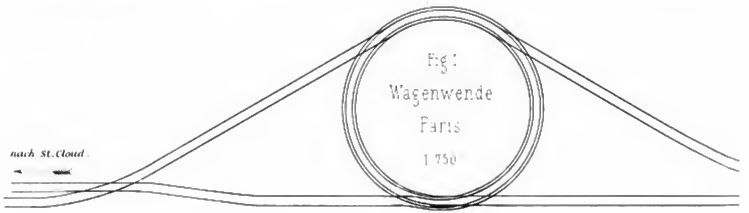
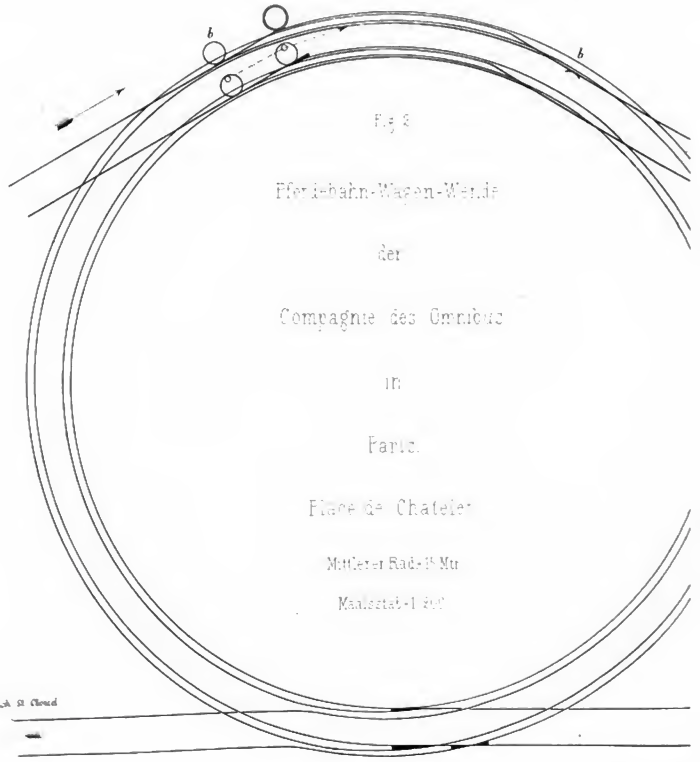
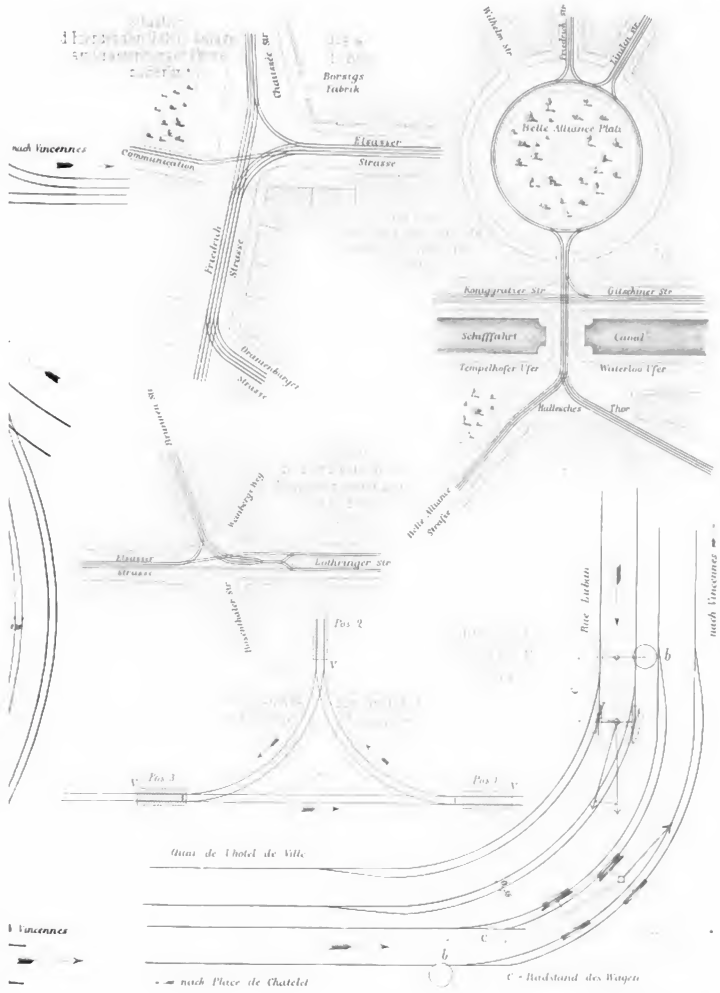


Fig 1
Wagenwende
Paris
1 750
nach St. Cloud


b
b
Fig 2
Pferdebahn-Wagen-Wende
der
Compagnie des Omnibus
in
Paris.
Place de Chatelet
Mittlerer Rad = 15 Mtr
Maaßstab = 1 200
nach St. Cloud



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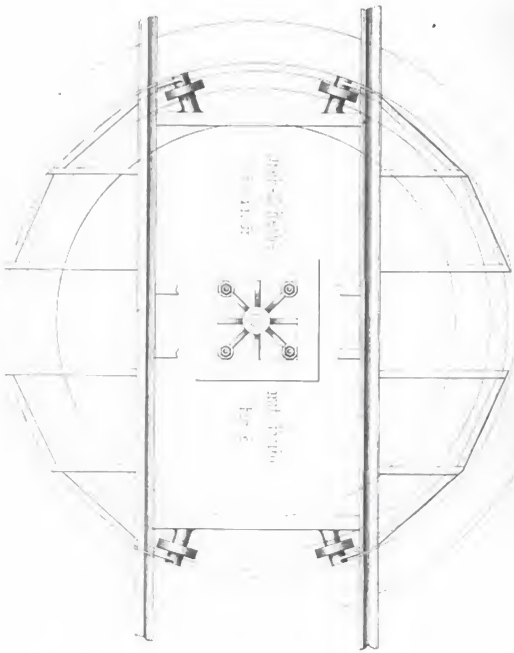


Fig 7. Querschnitt.

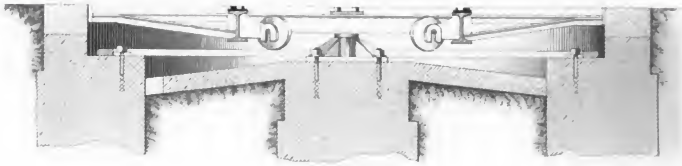
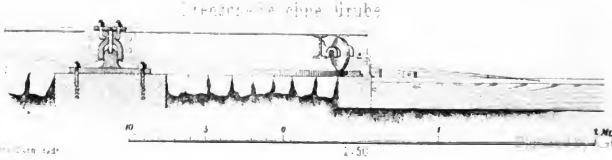


Fig 8



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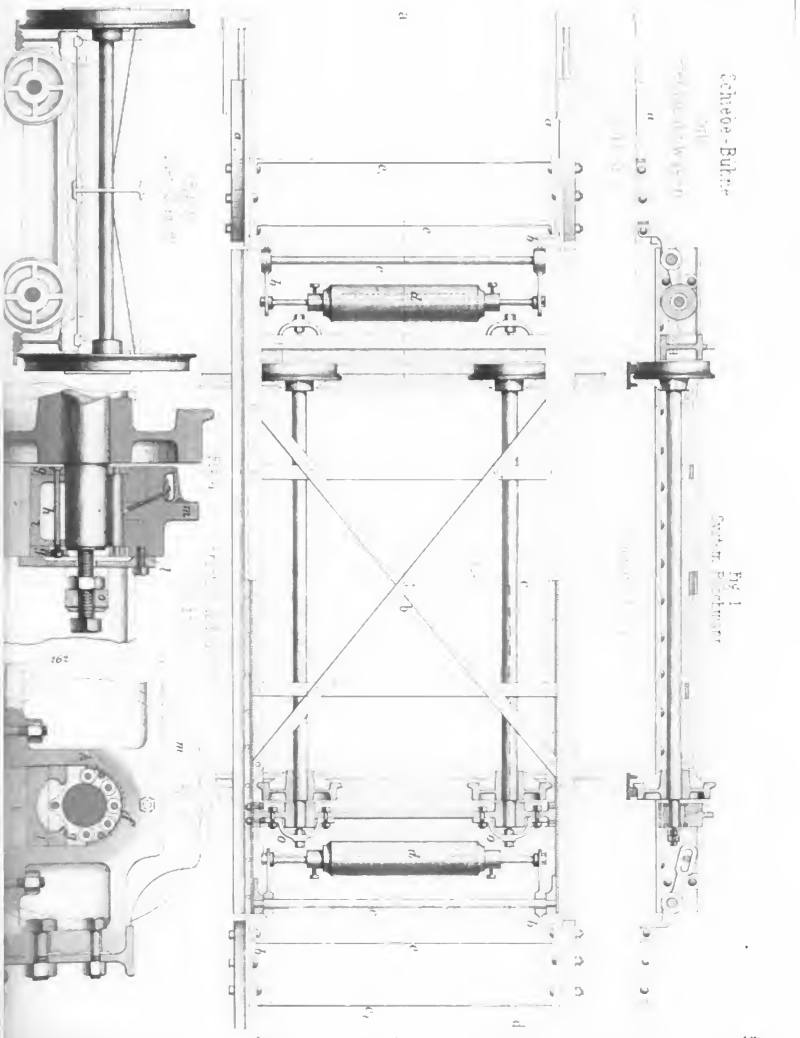

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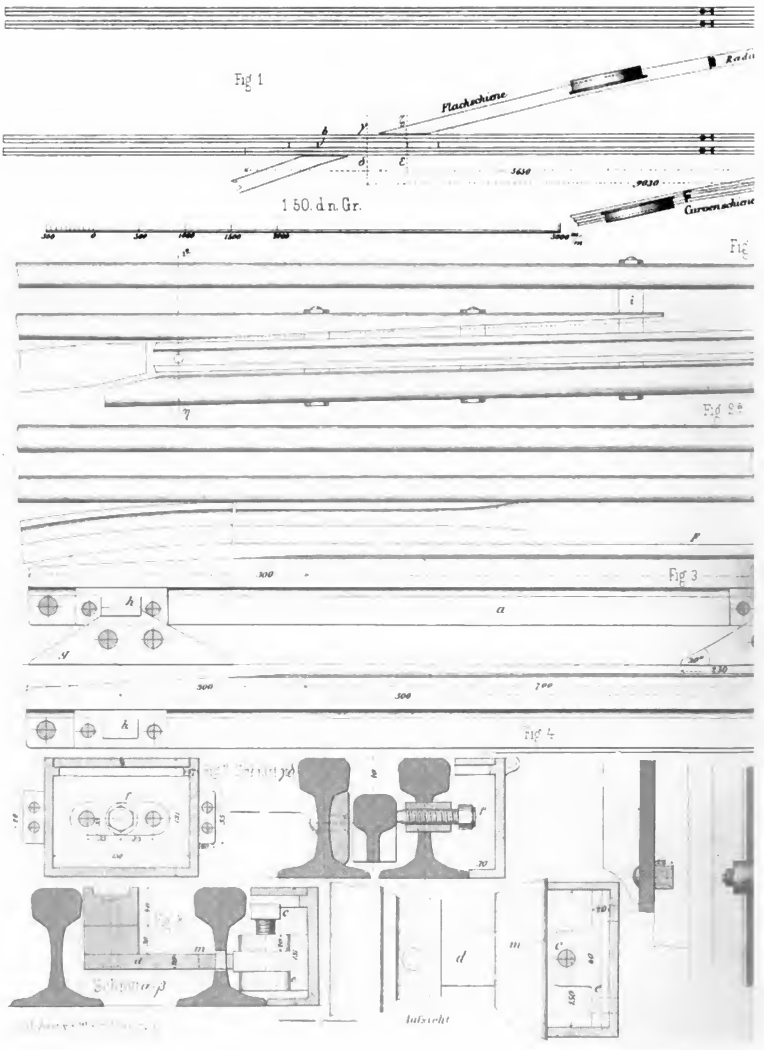
Pferdeba

im Gleise der alten Ve



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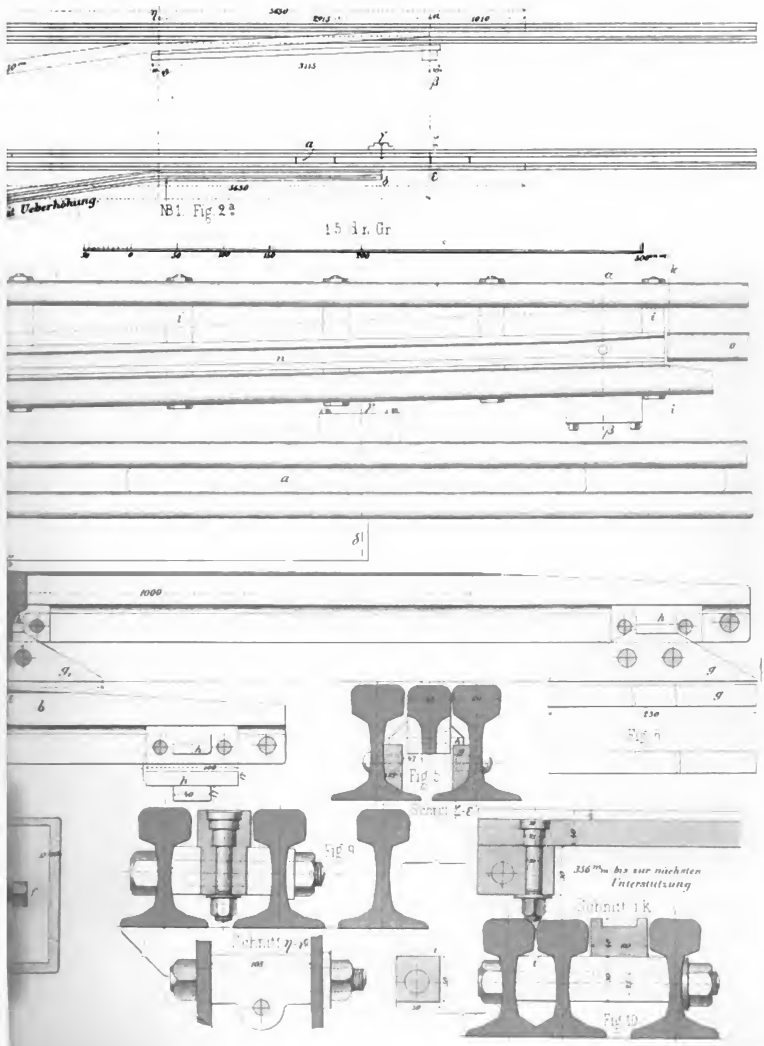

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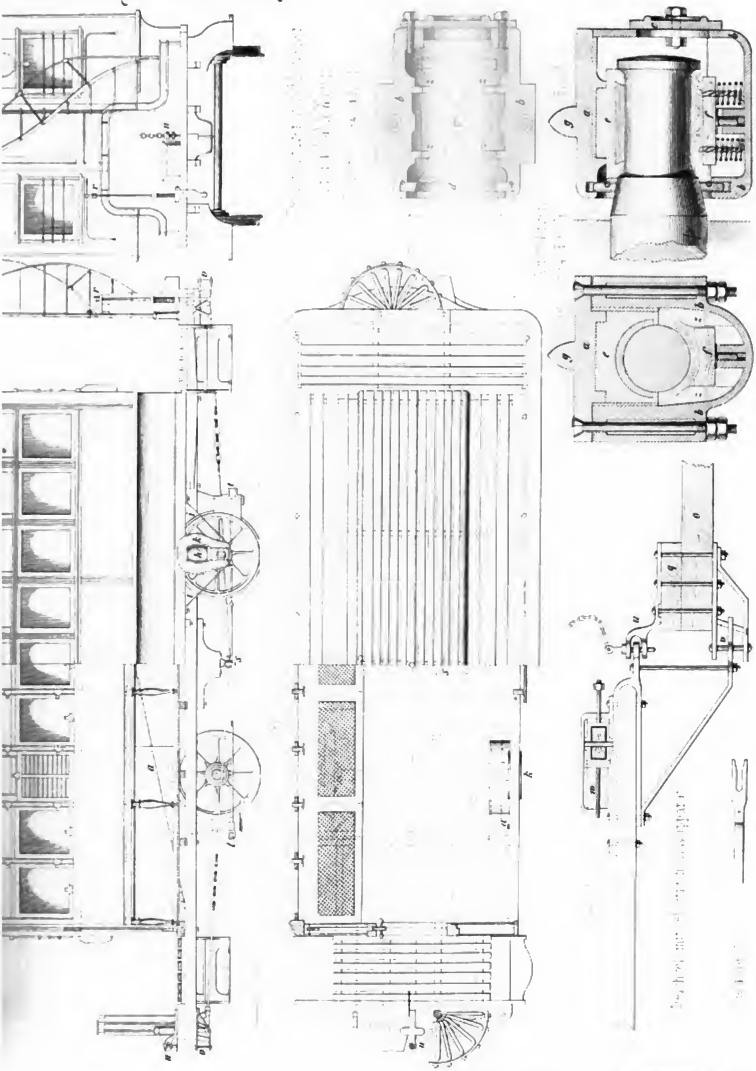
er zweispänniger Pferdebahn-Wagen



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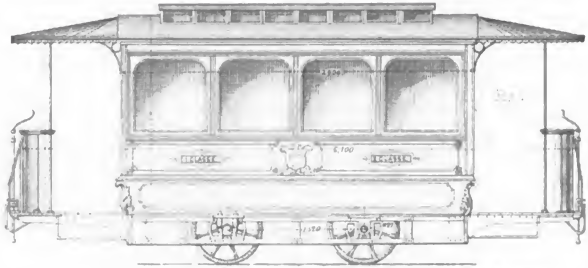
Offene und gesch

Geschloss. einspann. Pferdebahnwagen geb. in Nivelles (Belgi



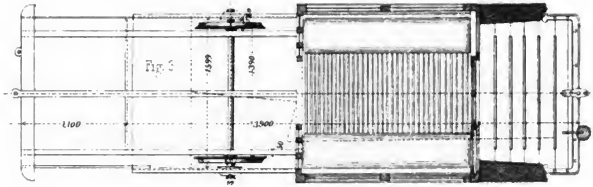
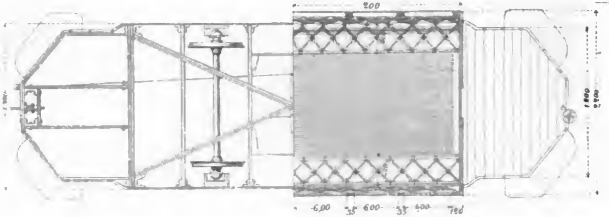
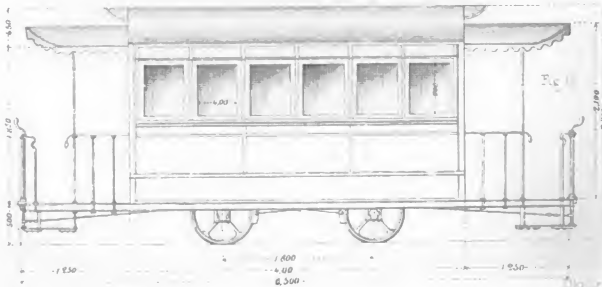
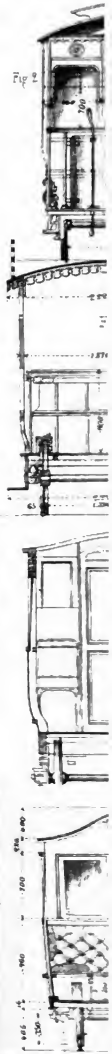


Fig. 19.



Geschloss. einspann. Pferdebahnwagen geb. von Ruard in Brüssel





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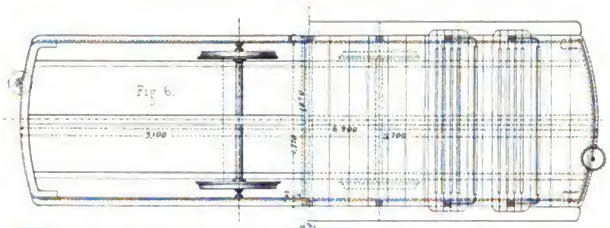
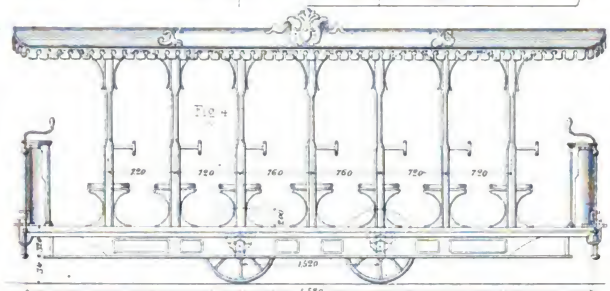
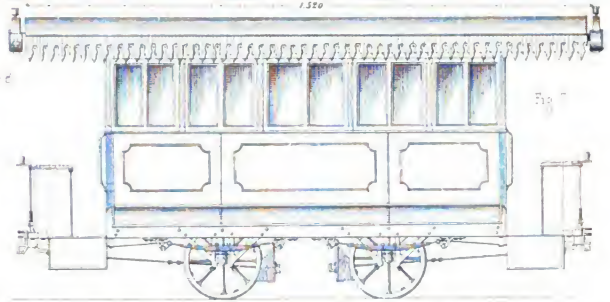
Offener 2-spänniger Pferdebahnwagen geb. in Nivelles (Belgien.)







Geschloss. 2-spänniger Pferdebahnwagen geb. in Hernals.

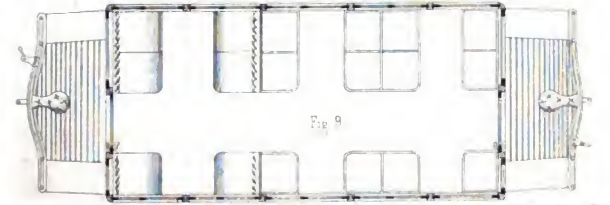


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Fig 1
Fig 2
Fig 3
Fig 4
Fig 5
Fig 6
Fig 7
Fig 8
Fig 9
Fig 10
Fig 11
Fig 12
Fig 13
Fig 14
Fig 15
Fig 16
Fig 17
Fig 18
Fig 19
Fig 20
Fig

Fig. 1. Personenwagen 1. Klasse.

Fig. 2. Personenwagen 3. Klasse.

Fig. 3. Gepäckwagen.

Fig. 4. Güterwagen.

Fig. 5. Bremserhäuschen.

Fig. 6. Drehgestell.

Fig. 7. Bremsgestänge.

Fig. 8. Kuppelung.

Fig. 9. Schutzvorrichtung.

Fig. 10. Schutzvorrichtung.

Fig. 11. Schutzvorrichtung.

Fig. 12. Schutzvorrichtung.

Fig. 13. Schutzvorrichtung.

Fig. 14. Schutzvorrichtung.

Fig. 15. Schutzvorrichtung.

Fig. 16. Schutzvorrichtung.

Fig. 17. Schutzvorrichtung.

Fig. 18. Schutzvorrichtung.

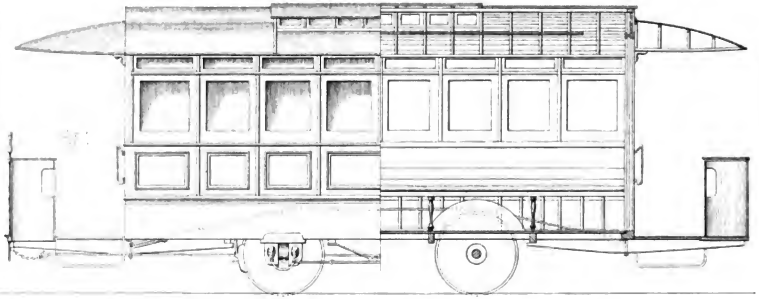
Fig. 19. Schutzvorrichtung.

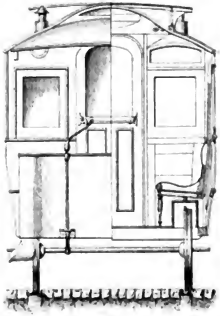
Fig. 20. Schutzvorrichtung.

Fig. 21. Schutzvorrichtung.

Fig.

Pferdebahnwagen gebaut vo





20 Sitzplätze
12 Stehplätze
32 Personen

Geschlossener zweispänniger Pferdebahnwagen
1 45 d n Gr.

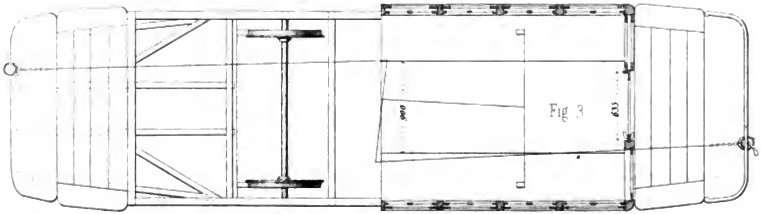


Fig 3

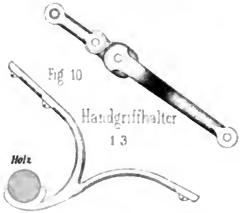


Fig 10

Handgriffhalter
1 3

Fig 5

20 Sitzplätze
12 Stehplätze

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Zweistarniger Pferdebahnwagen mit Laternendach
Fig. 7
Einstarniger Pferdebahnwagen
Griffeisen
Fig. 11
Fig. 12
Fig. 13
Fig. 14
Fig. 15
Fig. 16
Fig. 17
Fig. 18
Fig. 19
Fig. 20
Fig. 21
Fig. 22
Fig. 23
Fig. 24
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Fig. 26
Fig. 27
Fig. 28
Fig. 29
Fig. 30
Fig.

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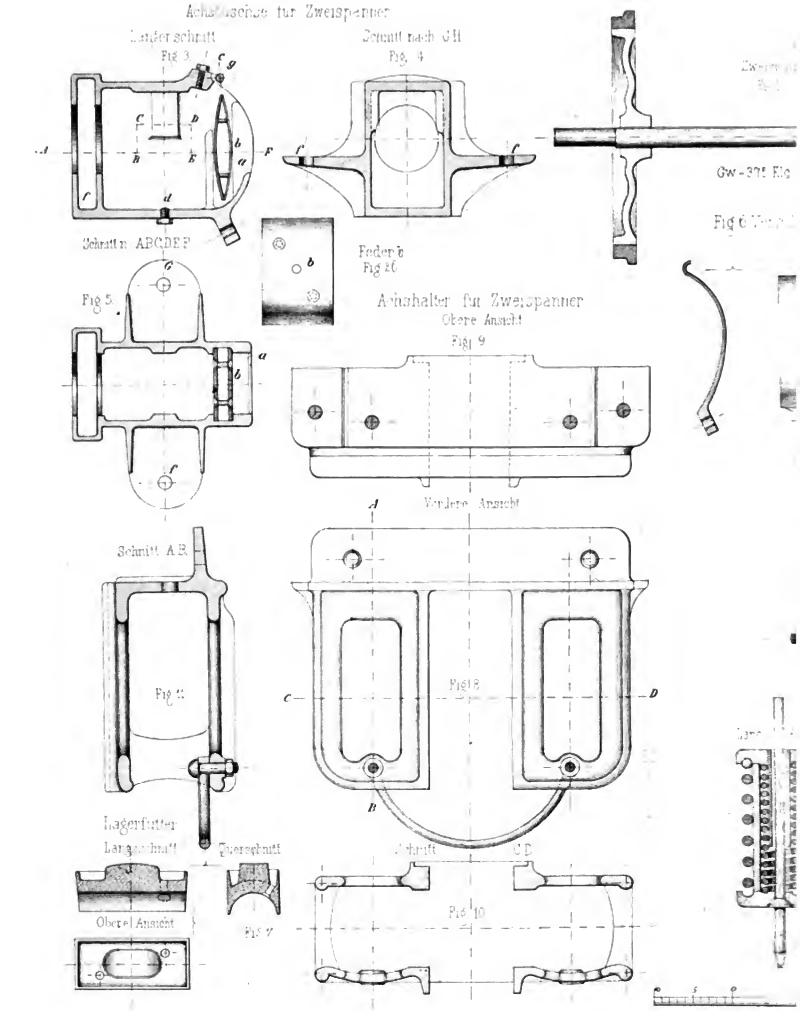

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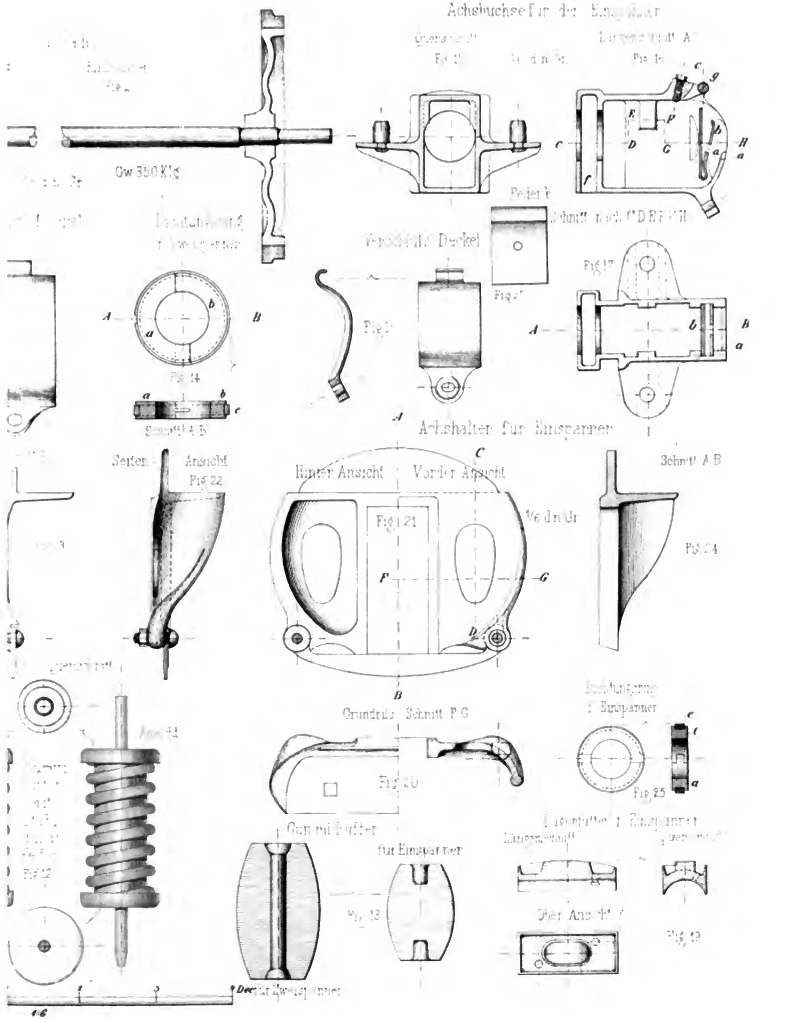
nschen Pferdebahn Wagen.



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Loses Rad
Fig 1.

Zweitheilige Achse.
System Rowan.
Fig 2.

Schnitt a b

1:15.

Schnitt d e

Loses Rad
Fig 3

Achshalter-Verbindung
Fig 4

für Zweispänner.
Fig 5.

1:15.

Fig 7 Achshalter-Verbindung für Einspänner.

Fig 8

Wagen-Lampe

Fig 10. 1:5

Längschwelle.

1:15

Fig 6.

Signal-Glocke.
1:5.
Fig 9.

Lith. Anst. v. F. Nies. Darmstadt.

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Details der John Stephenson'schen Wagen

Fig 11 Schleifgabel.

Fig 12

Elastischer Zug

Fig 14.

Signalglocke 1:3

Fig 19

Zugstange

Schlossnaken.

Fig 17

1:3.

und

Fig 18

Haken zum Laternenkasten.

Fig 20 1:3

Thurklinke mit Platte.

Fig 21 1:3

Thurgriff

Laternenring

Fig 15. 1:3

Fig 16.

Thürrolle 1:7

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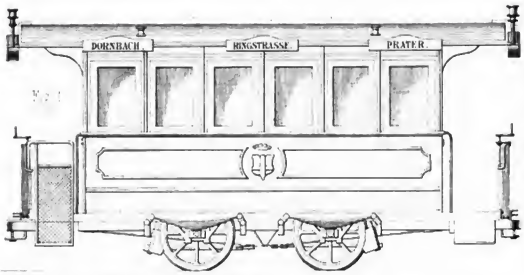

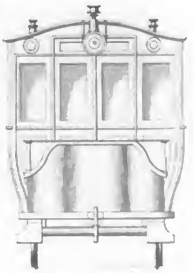

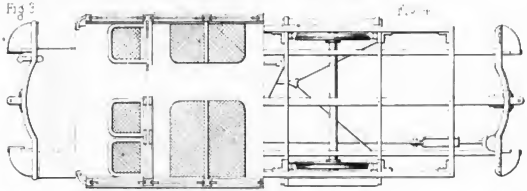

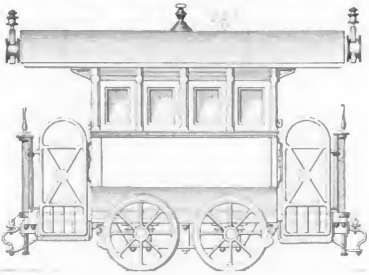

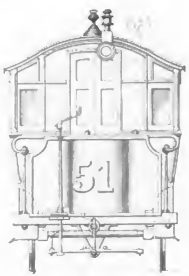

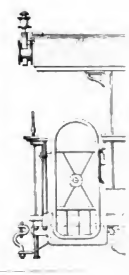

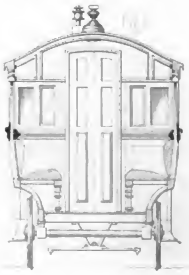

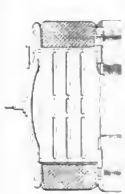

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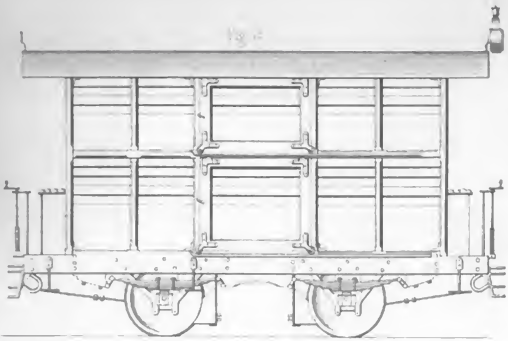

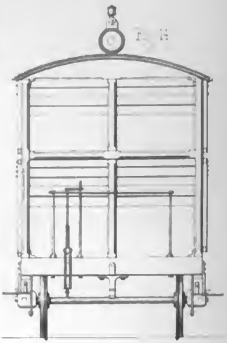

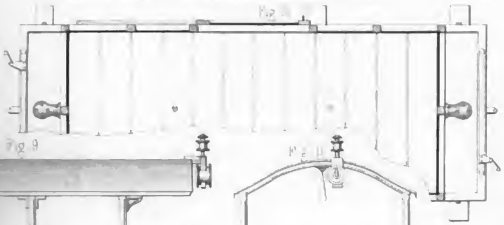

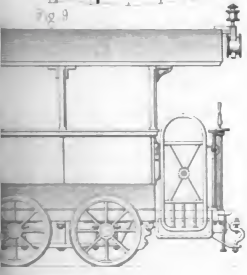

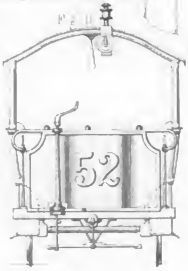

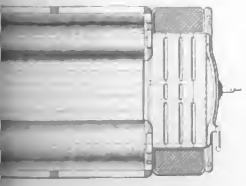

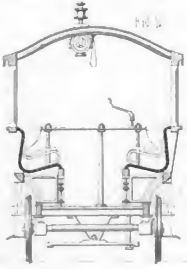

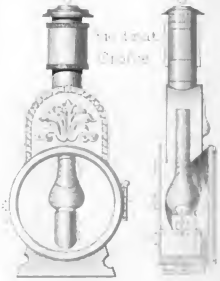

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Pferdebahnwagen für

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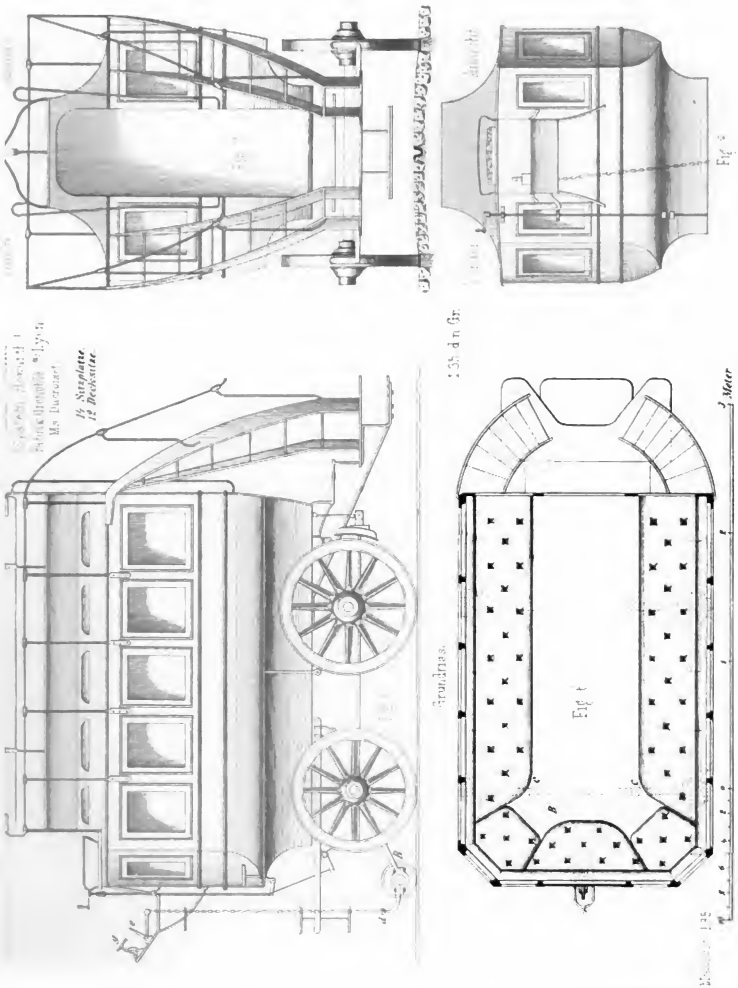

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Gleiskreuzungen mit

Situation der Gleiskreuzung der Gr Berliner P

Fig 1

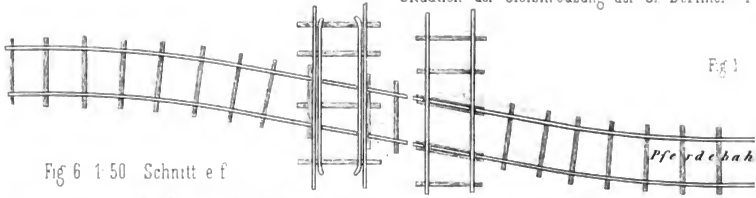


Fig 6 1:50 Schnitt e f

Fig 2. 1:50

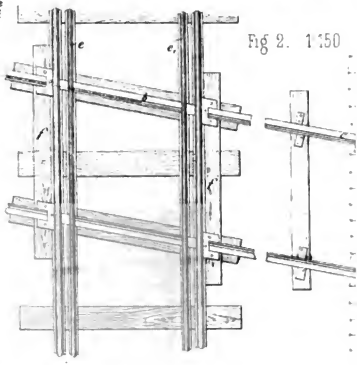
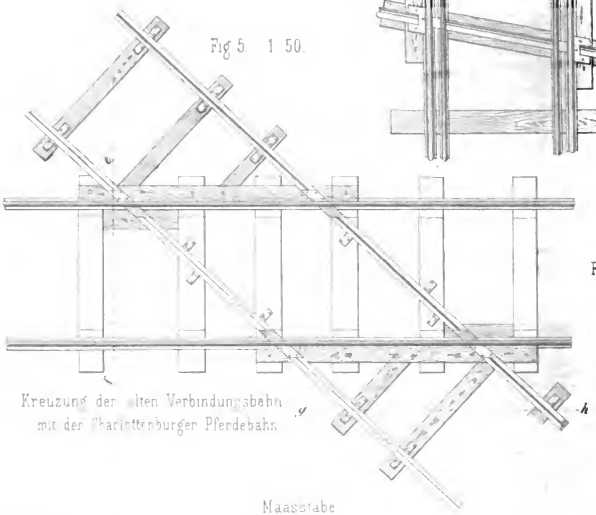


Fig 7 1:50 Schnitt g h

Fig 5. 1:50.



Kreuzung der alten Verbindungsbahn
mit der Charlottenburger Pferdebahn

Fig 10. Schnitt l m

Fig 9
Schnitt i k

Maassstabe
Fig 1-7.

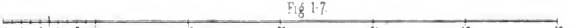
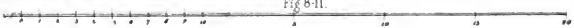


Fig 8-11.



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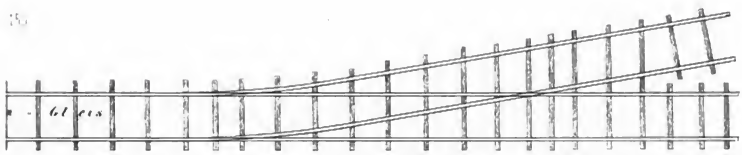
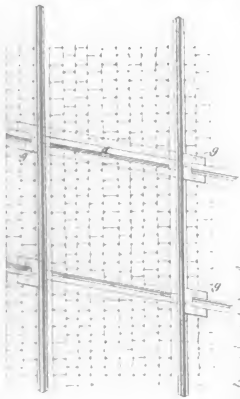
Locomotivbahnen.

...n mit der Berlin-Stettiner Eisenbahn





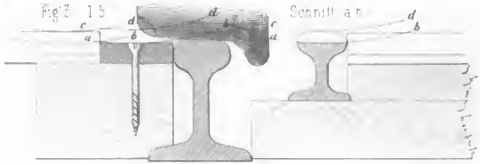
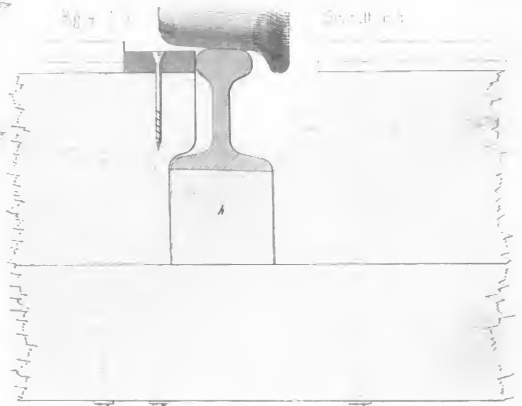


Fig 11 Schnitt n o



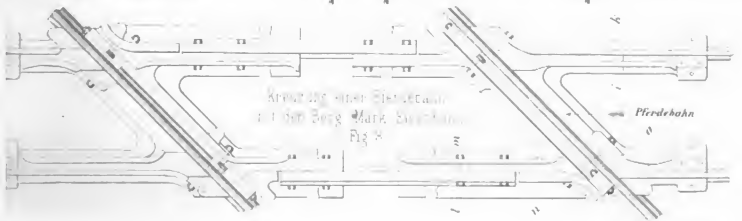


Fig 8

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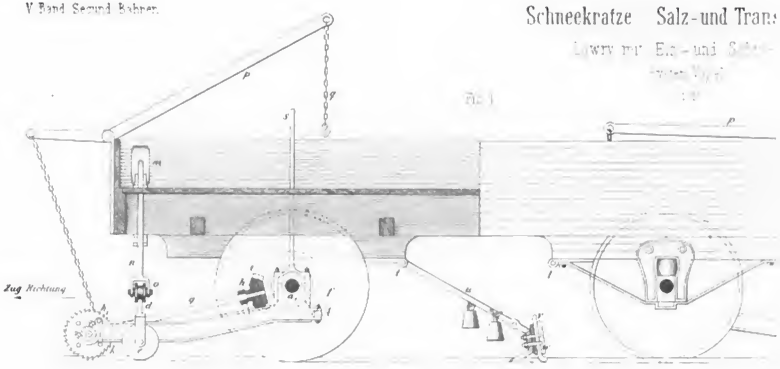
Schneekratze Salz-und Trans



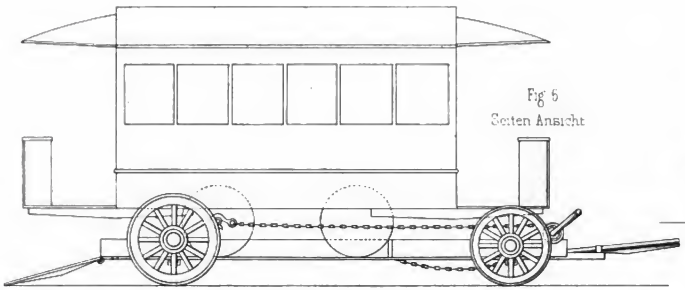
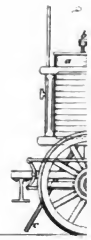
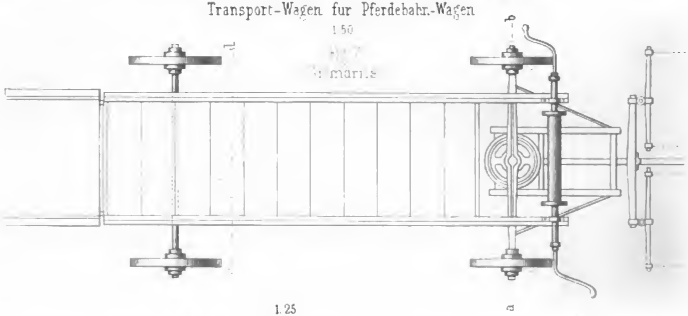


Fig 6
Seiten Ansicht



Transport-Wagen fur Pferdebahn-Wagen



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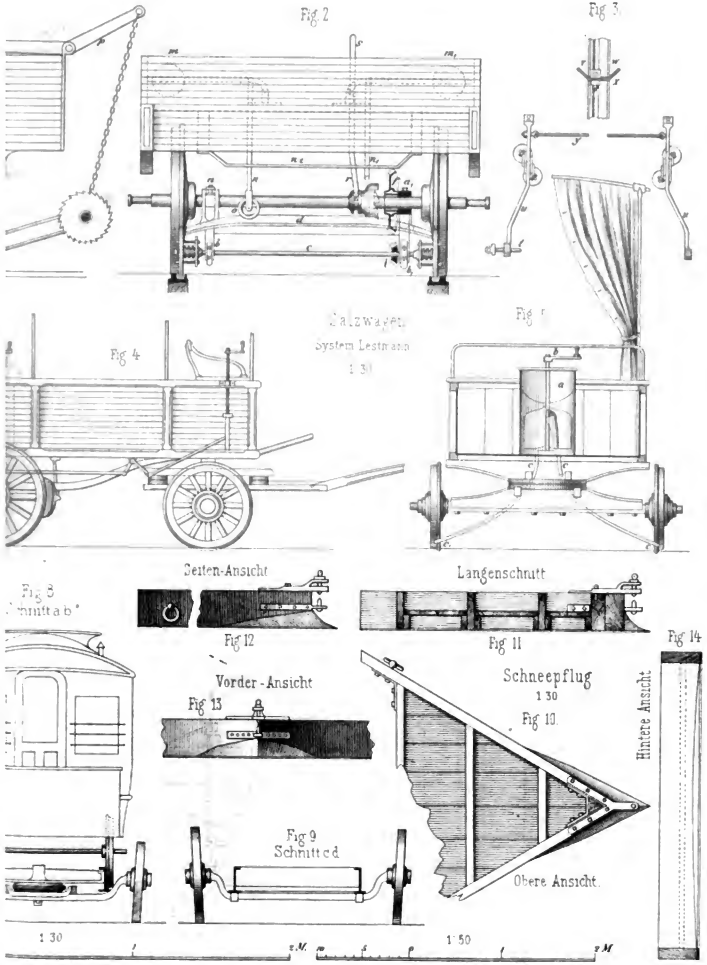

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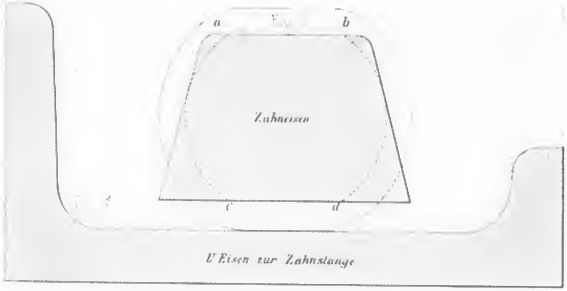

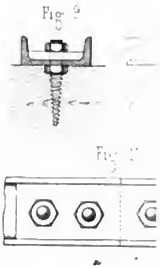

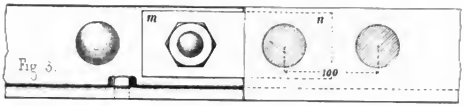

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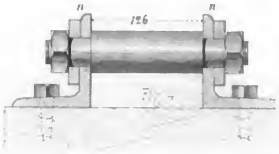

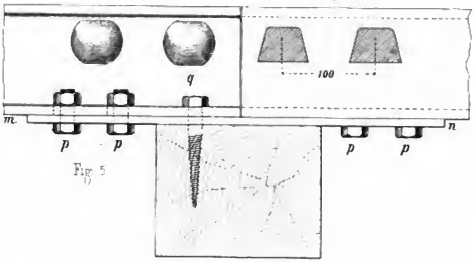

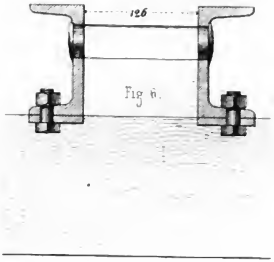

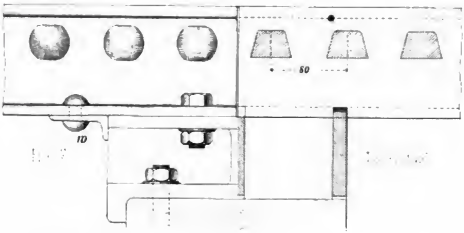

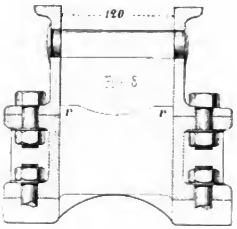

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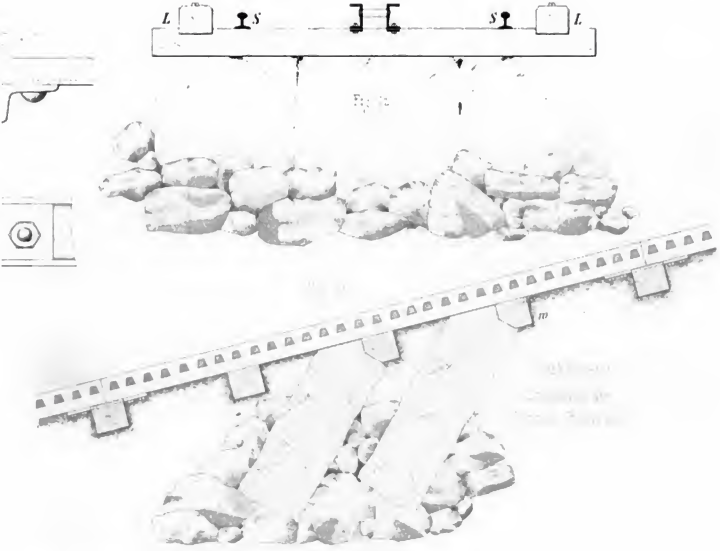

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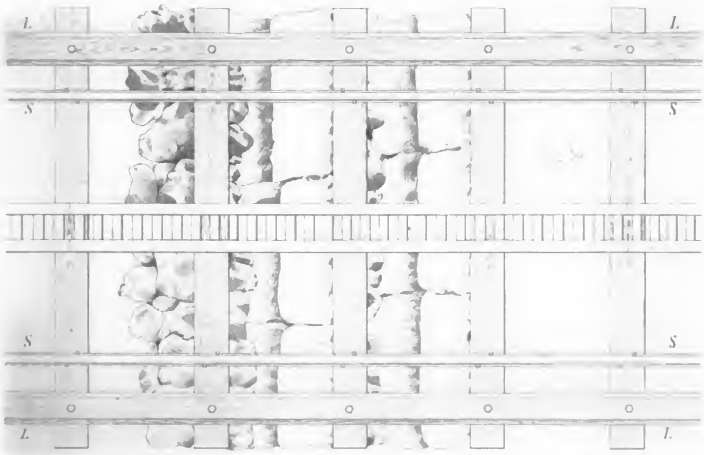

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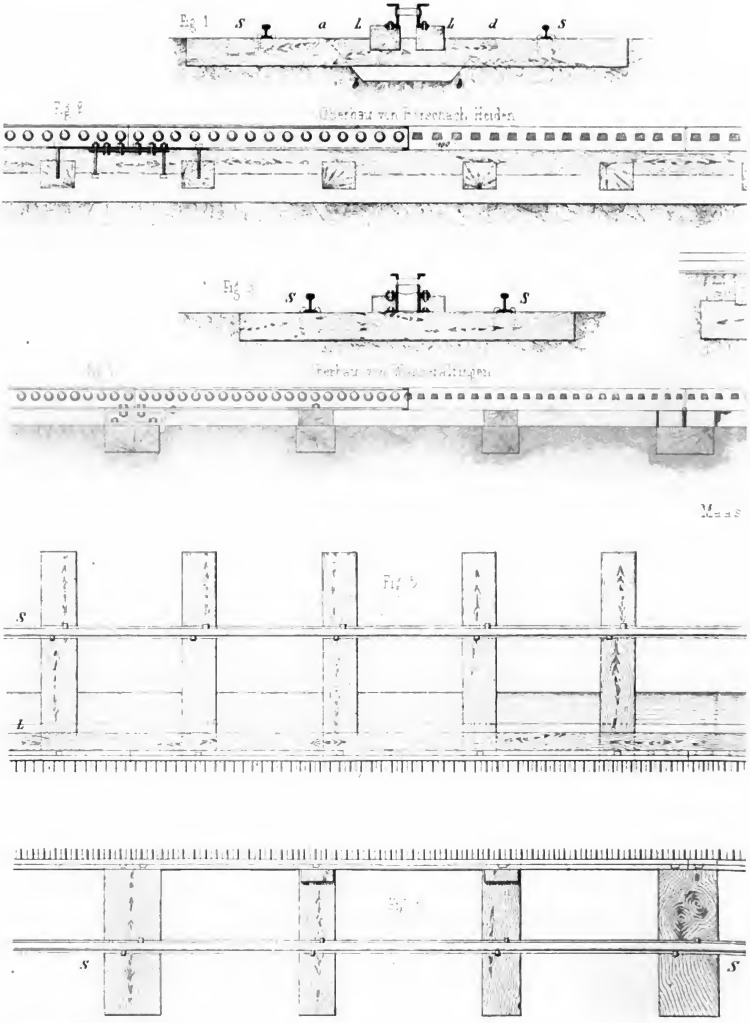

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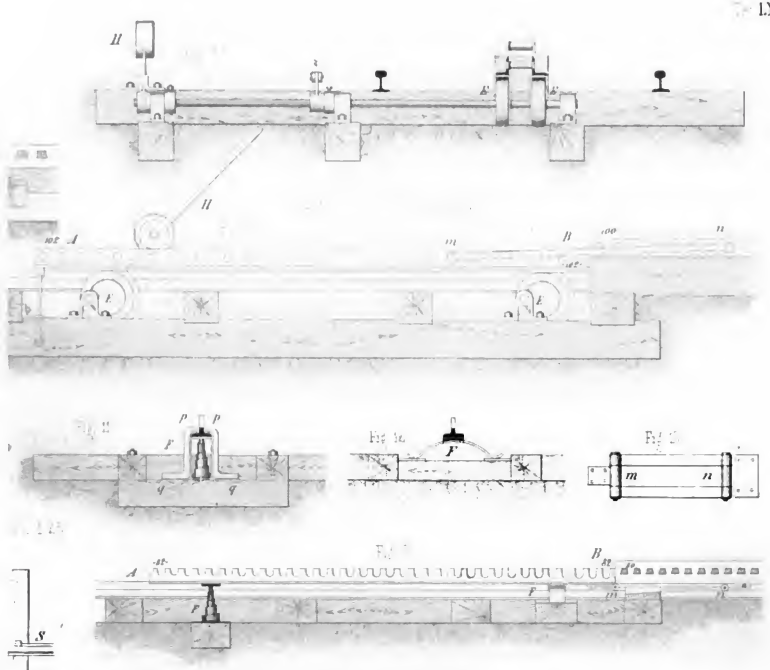

Einfahrt in Wasserschleusen.

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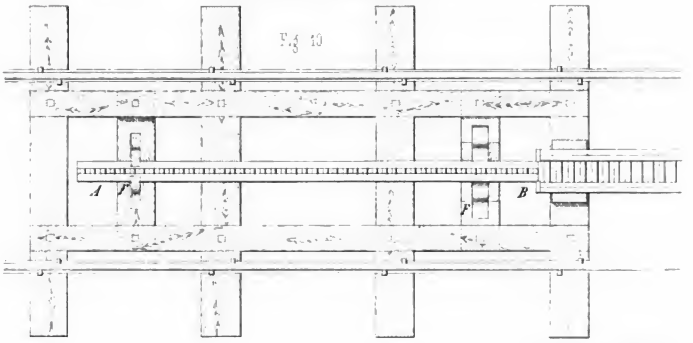

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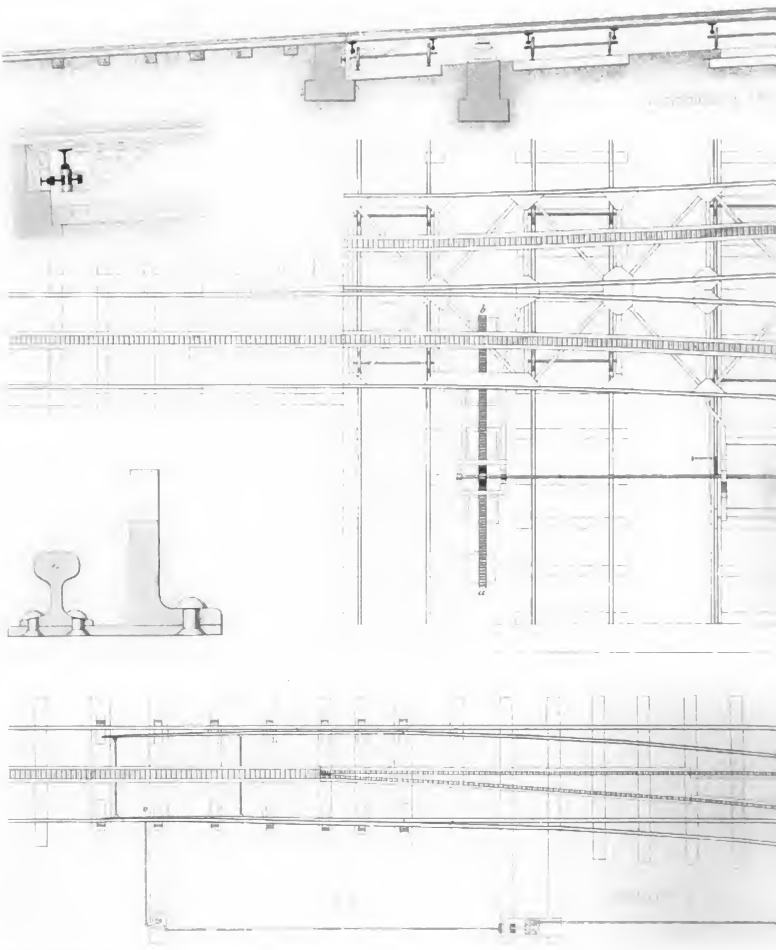

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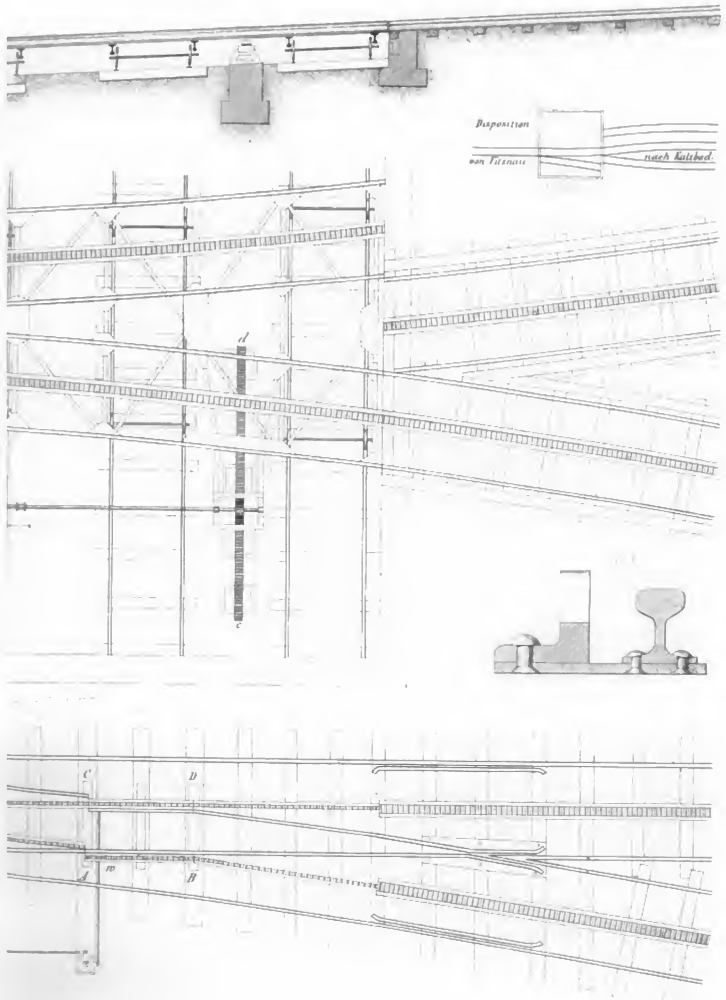

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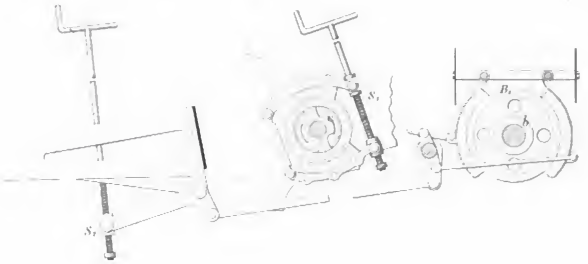

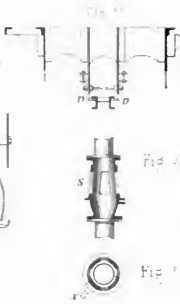

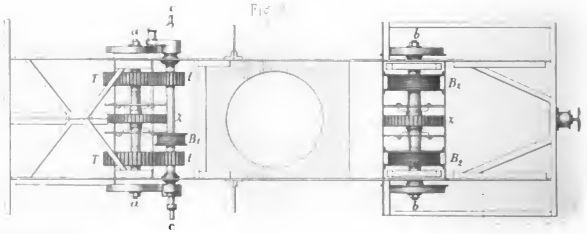

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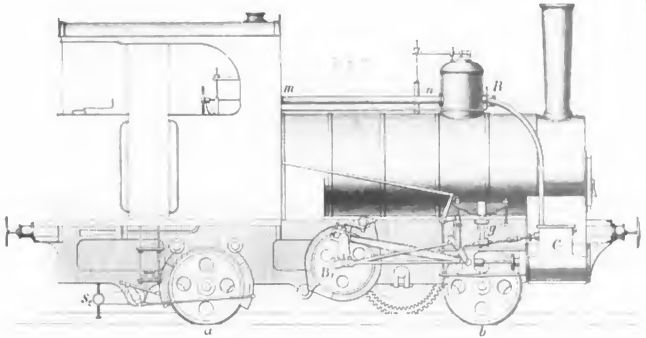
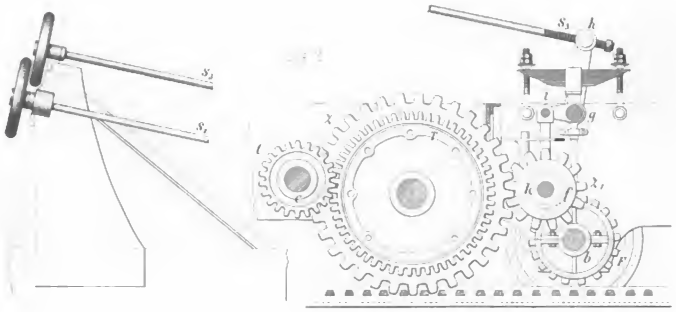


Locomotive Rorschach-Heiden



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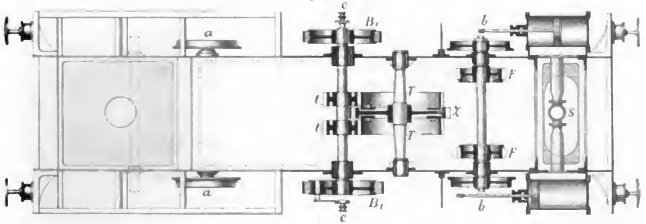

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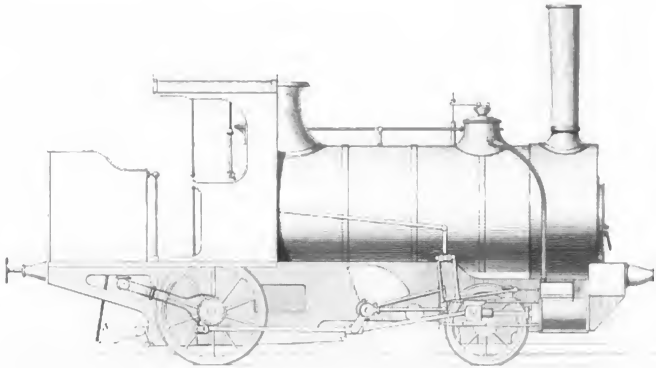

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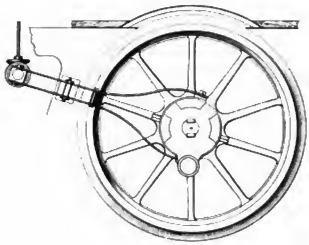

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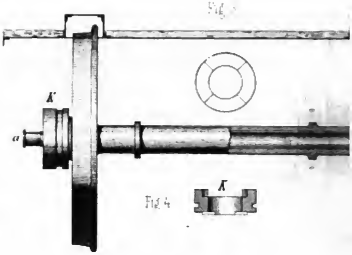

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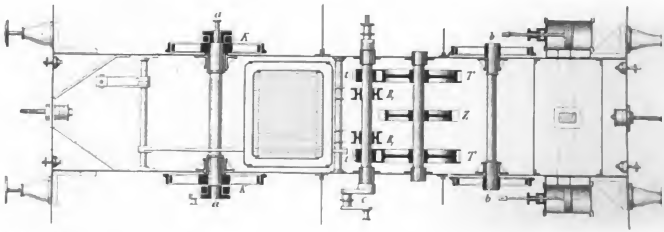
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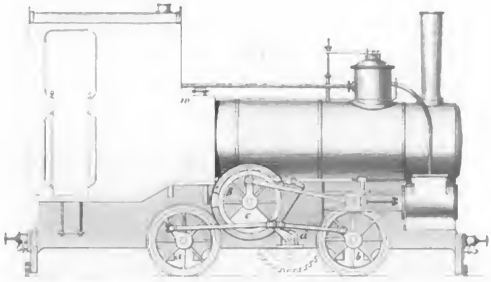

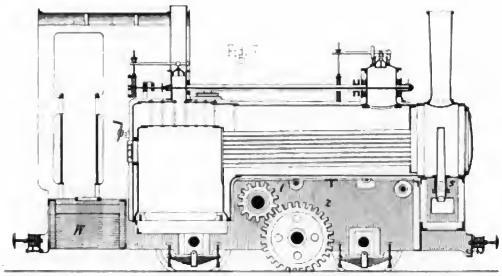

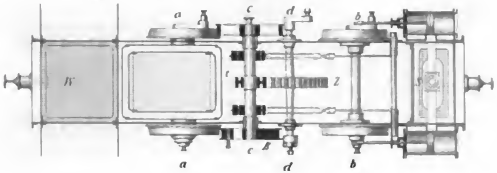

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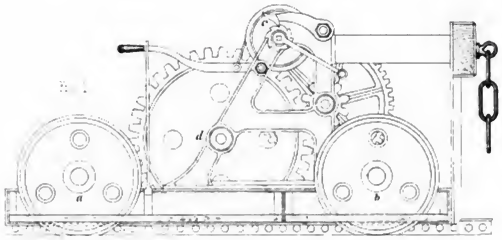

Zahnradlocomotive mit Handbetrieb
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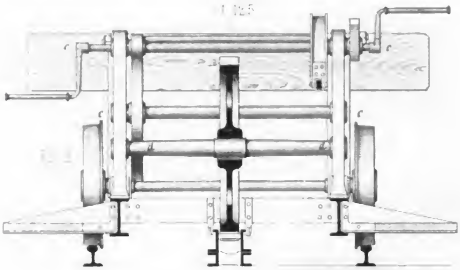

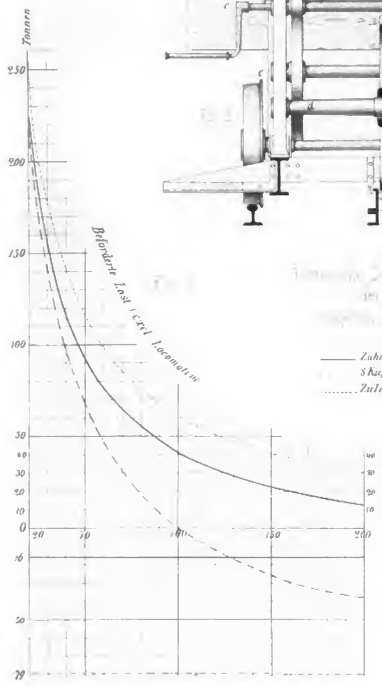

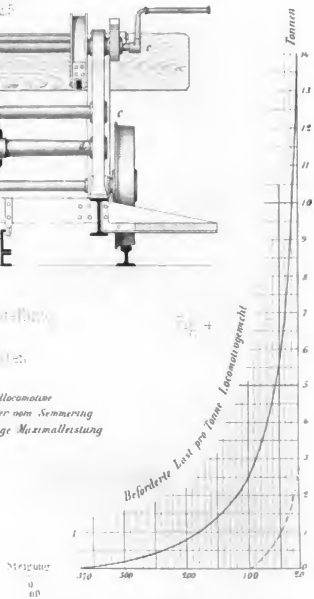

Zahnradloc	Totalgewicht	16 Tonnen
	Tangentialkraft	6
Semmeringloc	Adhasionsgewicht	32
	Tendergewicht	27
	Totalgewicht	79
	Tangentialkraft	8

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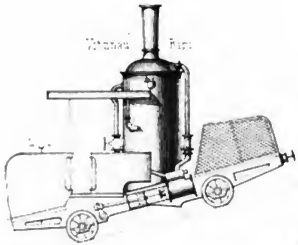
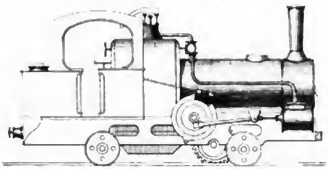
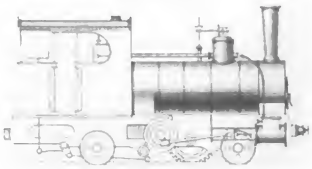
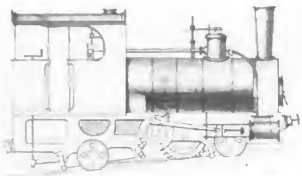
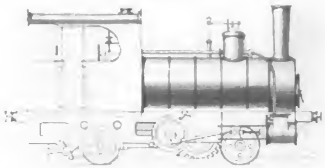
führte Zahnradlocomotiven
System Riggenbach.

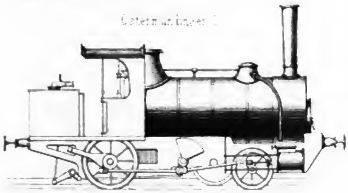


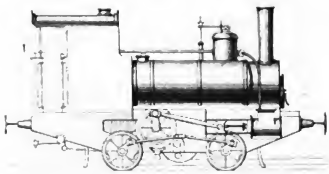


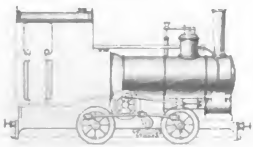


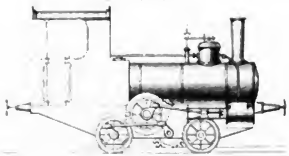












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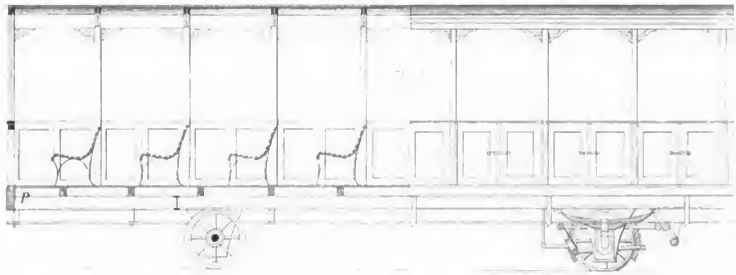
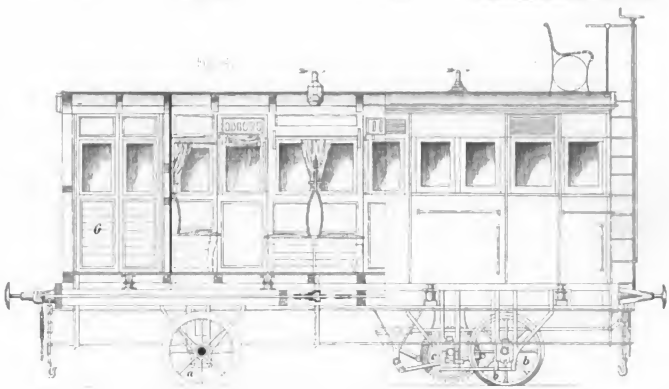
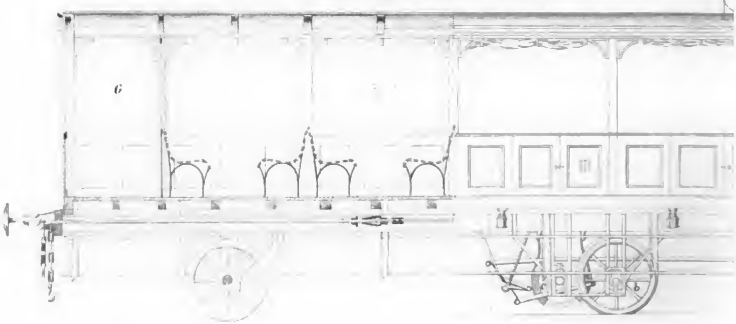
Personenwagen der Wiznau-Eghbahn.





Personenwagen der Forbach-Heiden-Bahn.



Lith. Anst. v. F. Wirth, Darmstadt.

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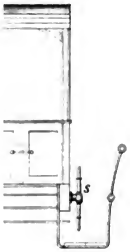
Fig. 2.



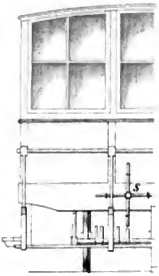
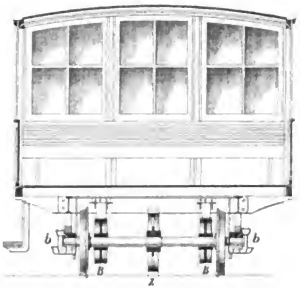


Fig. 3



Güterwagen der Bigibahnen.

Fig. 8

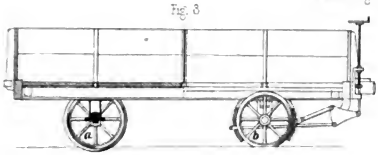
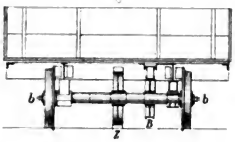
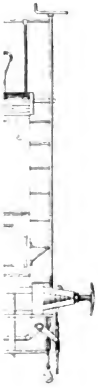


Fig. 9



Maßstab - 1:50

Fig 6



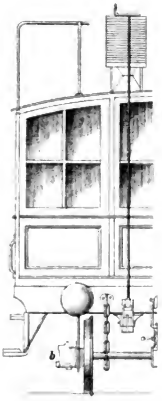
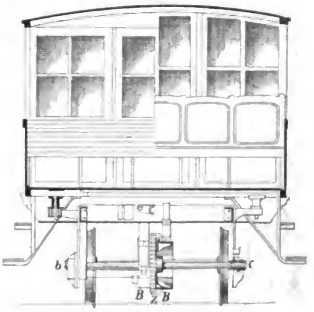


Fig 7.



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Zweicylindrische Locomotive der Mont Cenis Bahn (2ᵈ 2ᵇ

Fig 2ᵃ

Lange

Fig 2ᶜ

Langenprofil der Mont Cenis bahn

Fig 1

St. Michel

Fourneaux

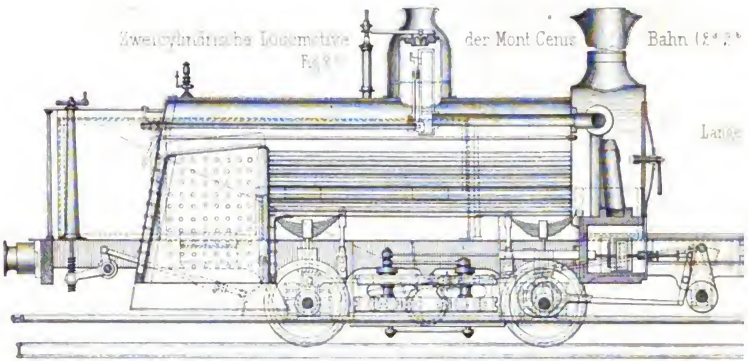
Modane

Esseillon

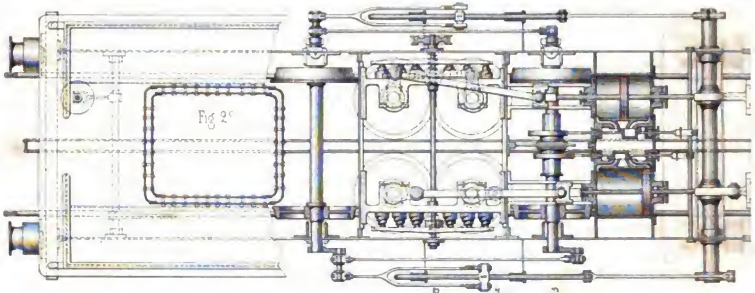
Verney

Ferrugnon

Lauslebourg



Schutzhaus N° 13



Orrasse

Hospiz Hôtel

La Grand Croix

Schutzhaus N° 3

Bard

Molaret Tunnel N° 1

Gasthaus

Susa

Gefälle 0.027

Frankreich

Italien

Meereshöhe

Lith. Anst. v. F. Wirtz, Darmstadt

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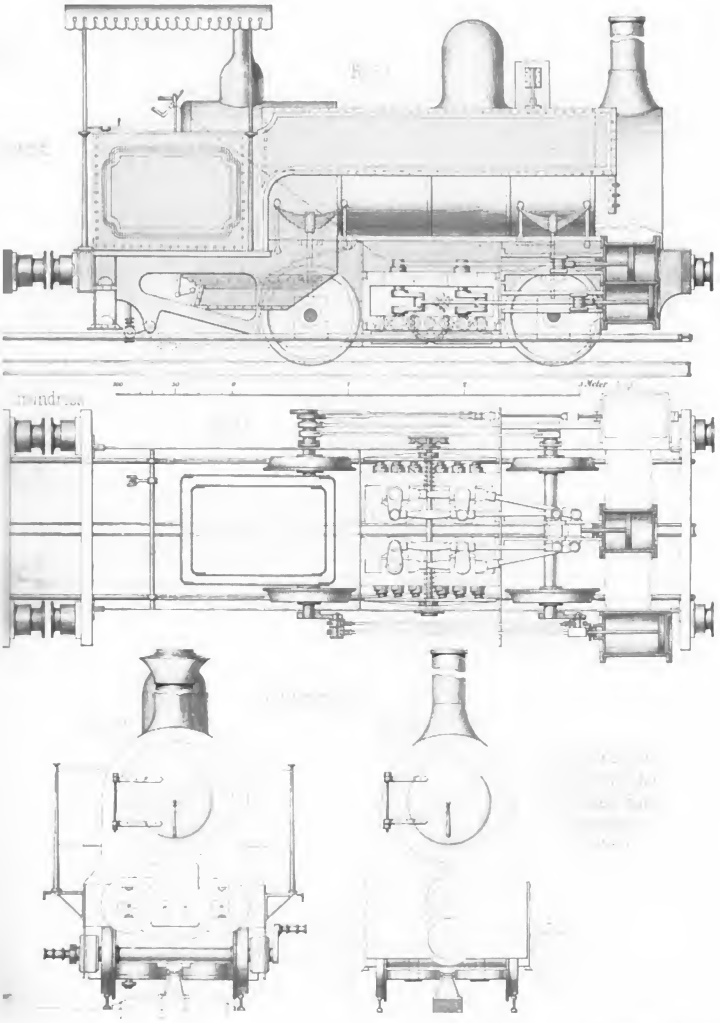

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Locomotive der

Fig. 3. Hinter-Ansicht

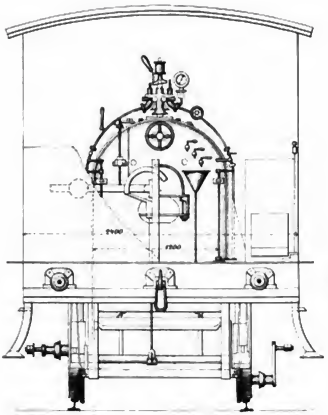
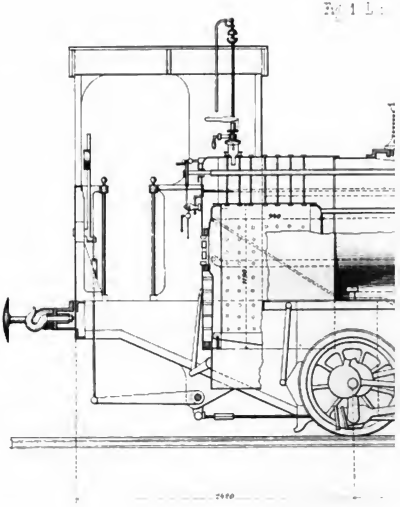
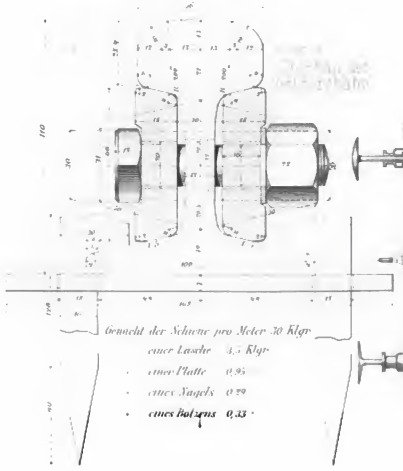
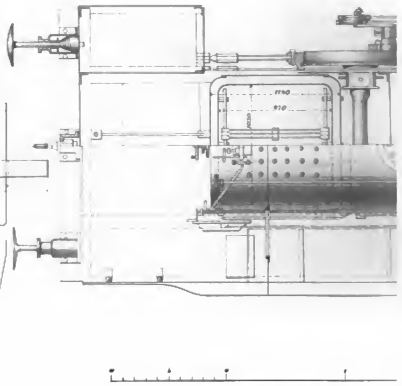


Fig. 1. L.







Gewicht der Schiene pro Meter 30 Klgr.
einer Lasche 3,5 Klgr.
einer Platte 0,95
eines Nagels 0,29
eines Bolzens 0,33

Kunst u. F. Wirth, Darmstadt

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schnitt

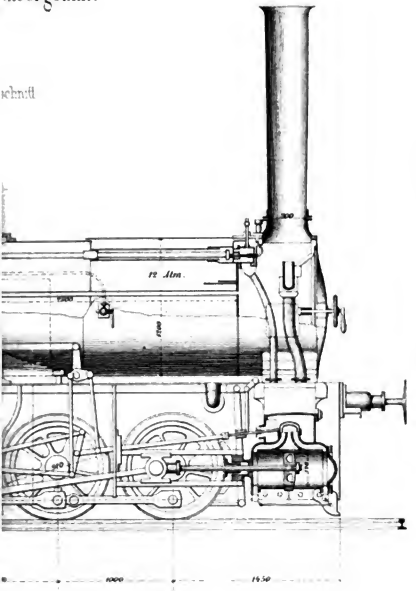


Fig. 2 Querschnitt

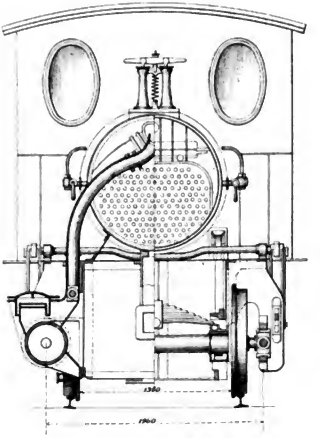


Fig. 4 Grundriss

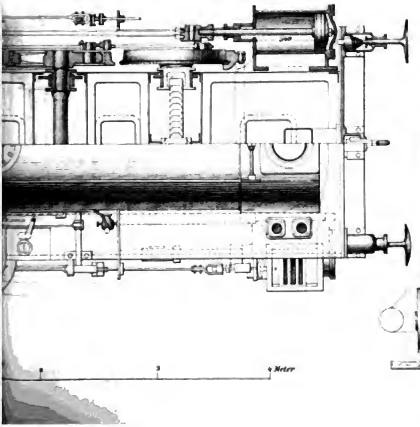


Fig. 6

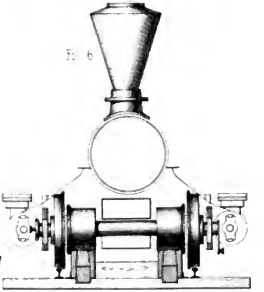
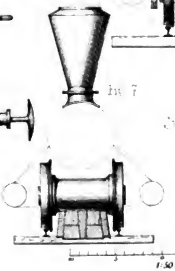


Fig. 7



A. Koechlin's
Superficialeisenbahn

Verlag v. W. Engelmann in Leipzig

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Personenwagen

Fig 1. Seitenansicht

Fig 2. Längenschnitt

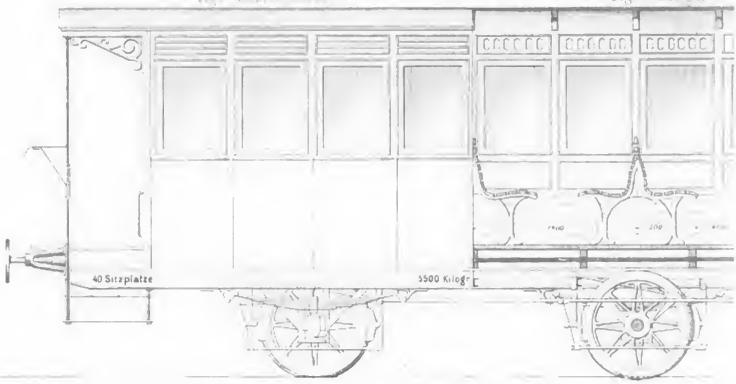

Fig 5. Grundriss

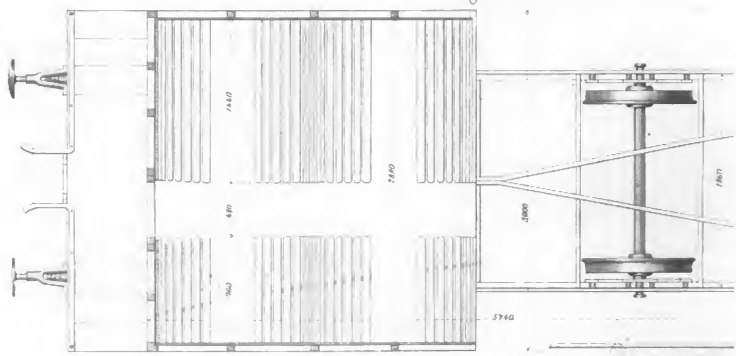

Fig 6.
Bremse
mit Sperrstange

Lith. Anst. v. J. Wirtz Darmstadt

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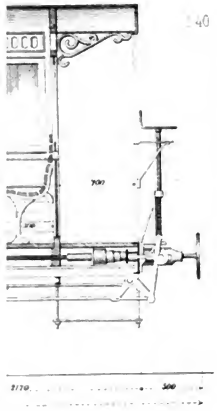
Fig 3 Stirnansicht. Fig 4 Querschnitt.



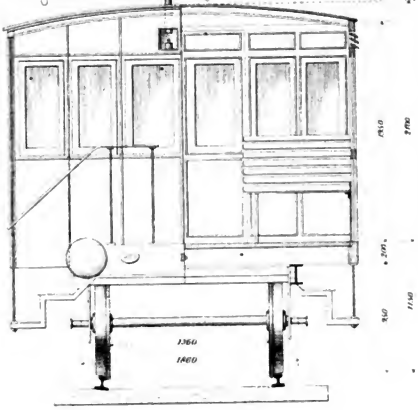
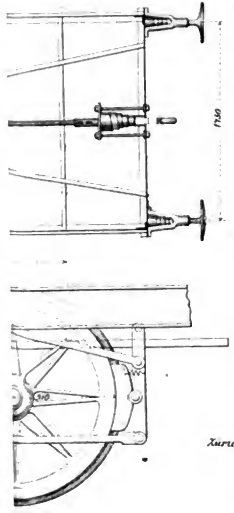


Fig 7.

Längenprofil der Uetlibergbahn.



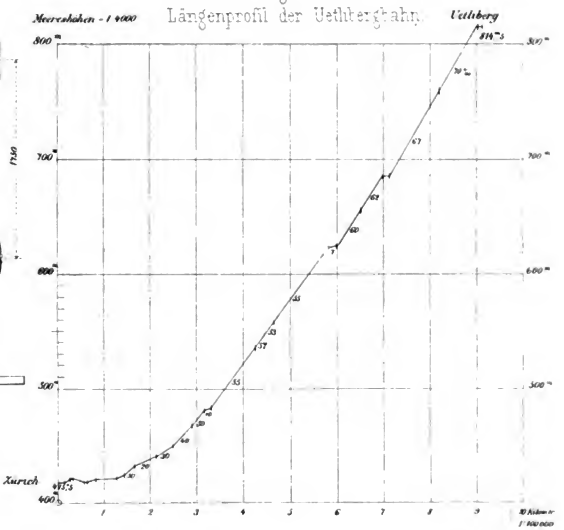


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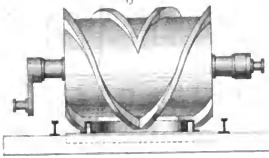
Fig. 1b



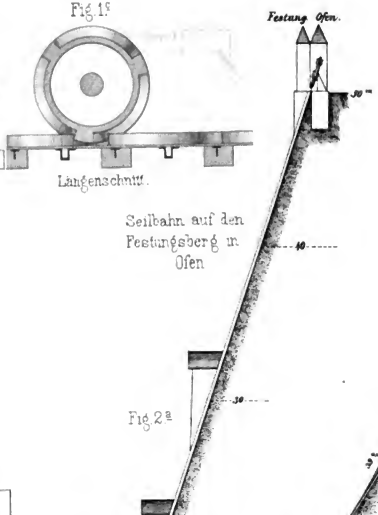
Querschnitt.

Fig. 1c

Längenschnitt.

Festung Ofen.

Seilbahn auf den Festungsberg in Ofen

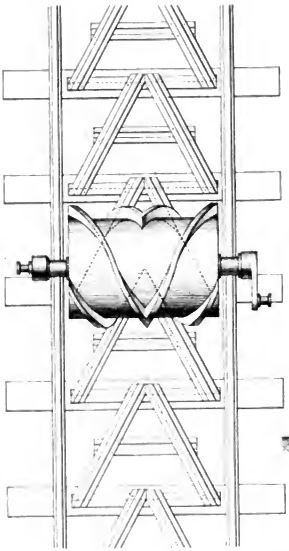


Wetli's Eisenbahn System.

Fig 1a

Fig 2a

Fig 2e

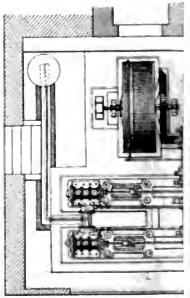


Stat. Ofner Wasserstadt

Donau

Länge 80 m

Länge 728 m



Betriebsmaschine im Fuße der Seilebene.

Grundriss

1 Meter = 140

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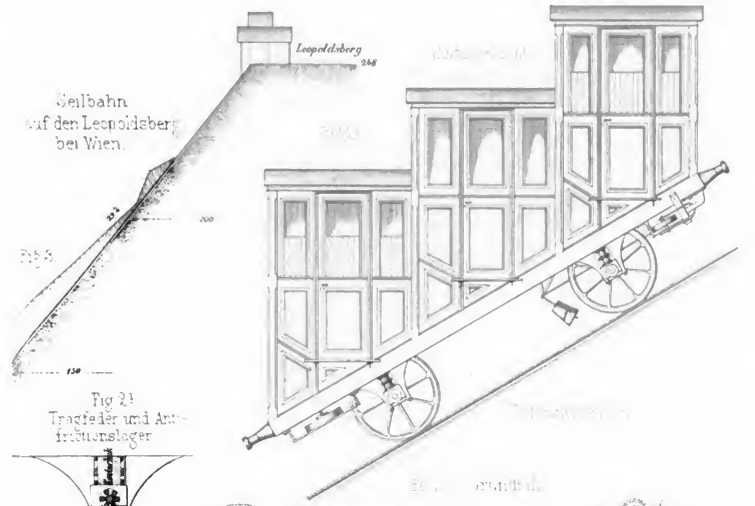


Seilbahn
auf den Leopoldsberg
bei Wien.

Fig. 3.

Fig. 2a
Tragfeder und Anti-
frictionslager

Fig. 2b

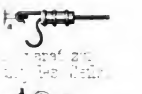
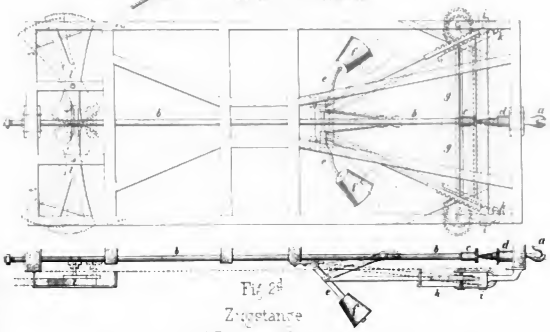
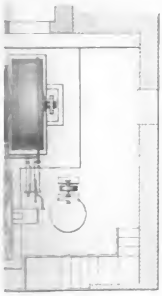
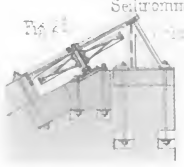


Fig. 2d
Zugstange
und Fangvorrichtung





Seilrommel am obern Theil der Rampe



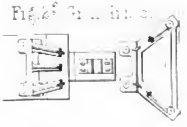


Fig. 2c

Fig. 2e

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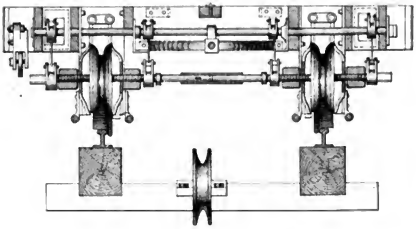
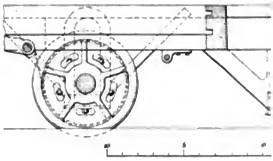
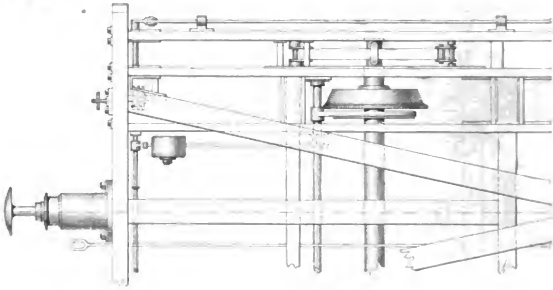
Fig 1ª Querschnitt





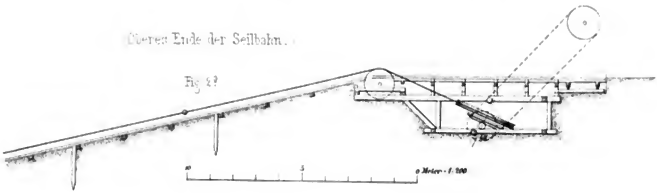
Seilbahn von
Lyon
nach
Croix-Rousse

Untergestell
des ersten
Personen Wagens
nebst der Bremse.



Oberes Ende der Seilbahn.

Fig 2ª



Seilbahn auf die Scylmenalp (System G. Sigl)

Unteres Ende der Seilbahn

Fig 2 b

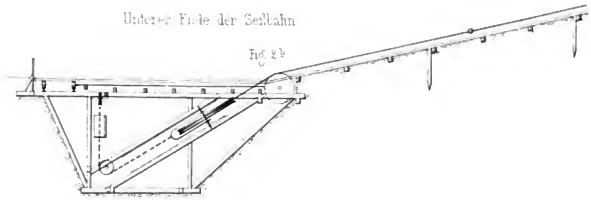


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Fig. 1a Längenschnitt

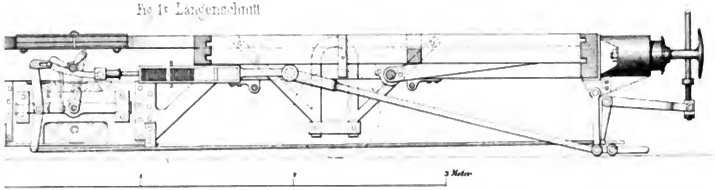

Fig. 1b Grundriss.

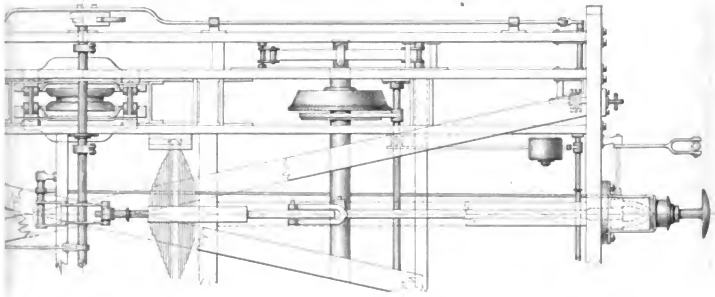

Fig. 3a

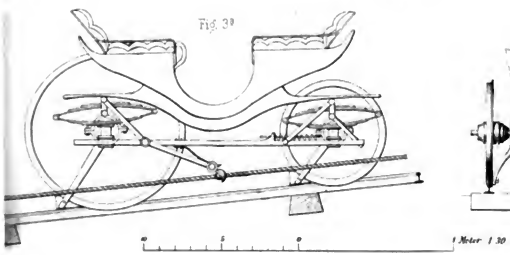

Fig. 3b

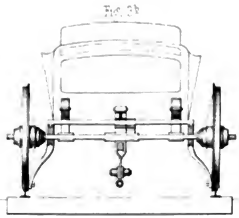

Fig. 3c

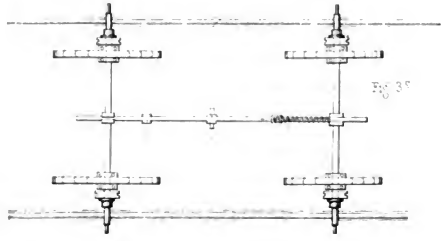

Fig. 3a, 3b, 3c
Personen-Wagen
der Sigl'schen Seilbahn

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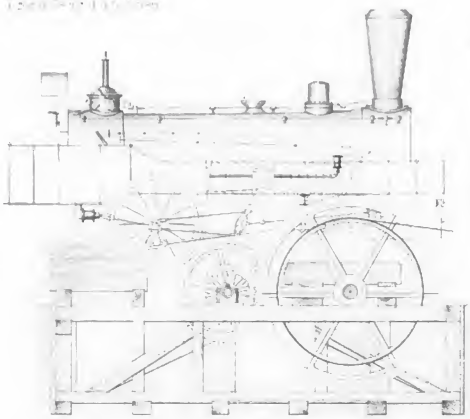

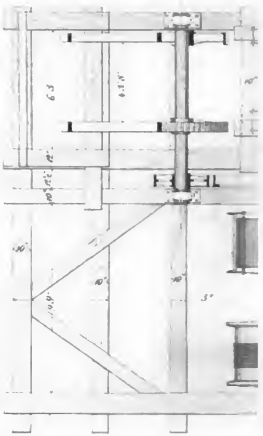

Fig. 1 (Pl.)

Fig. 2 (Pl.)

Fig. 3 (Pl.)

Fig. 4 (Pl.)

Fig. 5 (Pl.)

Fig. 6 (Pl.)

Fig. 7 (Pl.)

Fig. 8 (Pl.)

Fig. 9 (Pl.)

Fig. 10 (Pl.)

Fig. 11 (Pl.)

Fig. 12 (Pl.)

Fig. 13 (Pl.)

Fig. 14 (Pl.)

Fig. 15 (Pl.)

Fig. 16 (Pl.)

Fig. 17 (Pl.)

Fig. 18 (Pl.)

Fig. 19 (Pl.)

Fig. 20 (Pl.)

Fig. 21 (Pl.)

Fig. 22 (Pl.)

Fig. 23 (Pl.)

Fig. 24 (Pl.)

Fig. 25 (Pl.)

Fig. 26 (Pl.)

Fig. 27 (Pl.)

Fig. 28 (Pl.)

Fig. 29 (Pl.)

Fig. 30 (Pl.)

Fig. 31 (Pl.)

Fig. 32 (Pl.)

Fig. 33 (Pl.)

Fig. 34 (Pl.)

Fig. 35 (Pl.)

Fig. 36 (Pl.)

Fig. 37 (Pl.)

Fig. 38 (Pl.)

Fig. 39 (Pl.)

Fig. 40 (Pl.)

Fig. 41 (Pl.)

Fig. 42 (Pl.)

Fig. 43 (Pl.)

Fig. 44 (Pl.)

Fig. 45 (Pl.)

Fig. 46 (Pl.)

Fig. 47 (Pl.)

Fig. 48 (Pl.)

Fig. 49 (Pl.)

Fig. 50 (Pl.)

Fig. 51 (Pl.)

Fig. 52 (Pl.)

Fig. 53 (Pl.)

Fig. 54 (Pl.)

Fig. 55 (Pl.)

Fig. 56 (Pl.)

Fig. 57 (Pl.)

Fig. 58 (Pl.)

Fig. 59 (Pl.)

Fig. 60 (Pl.)

Fig. 61 (Pl.)

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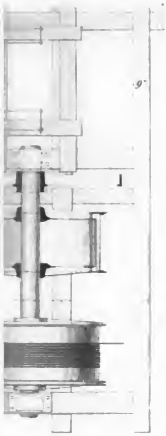

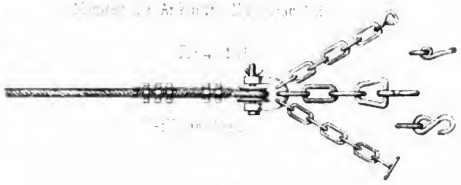

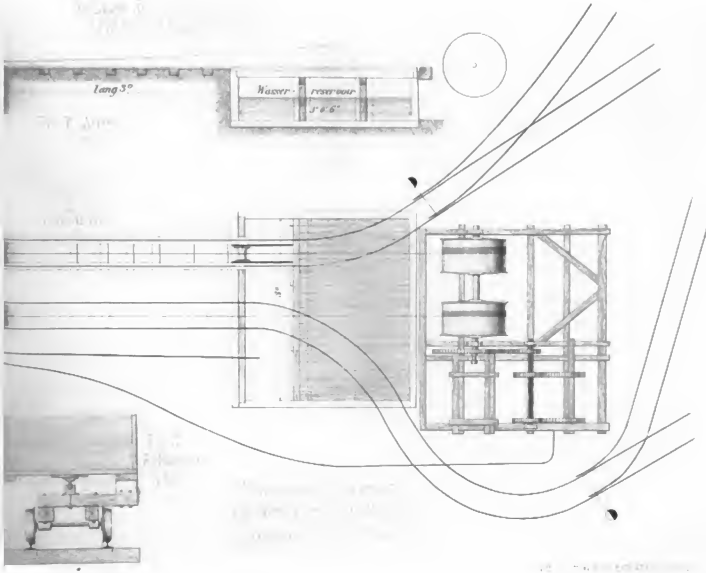

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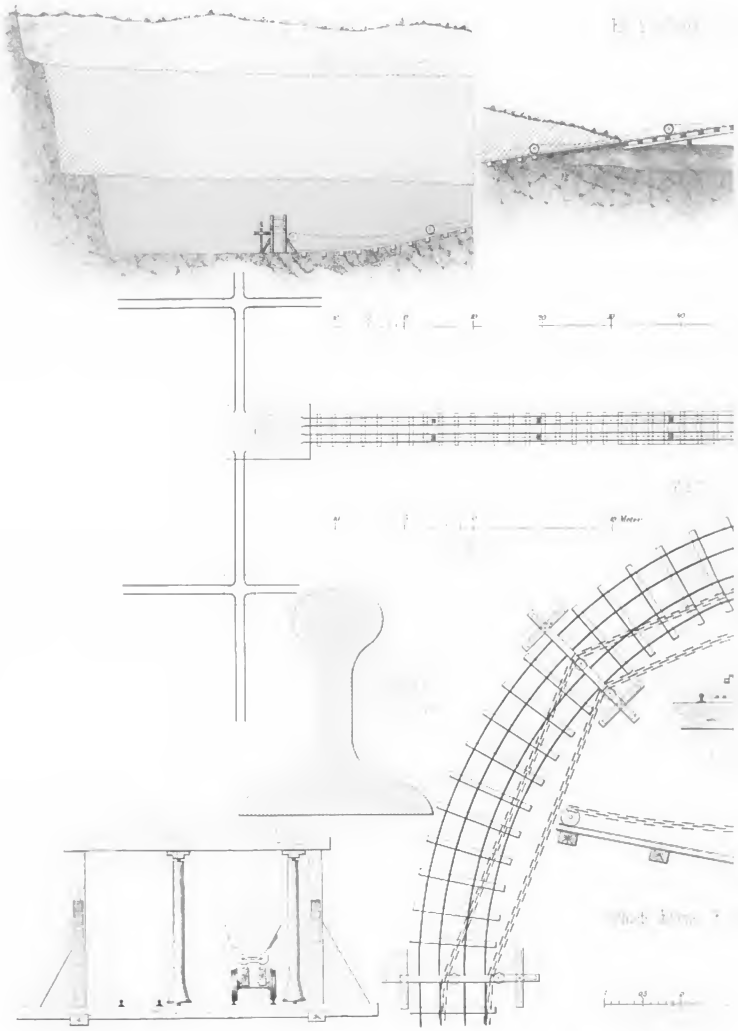

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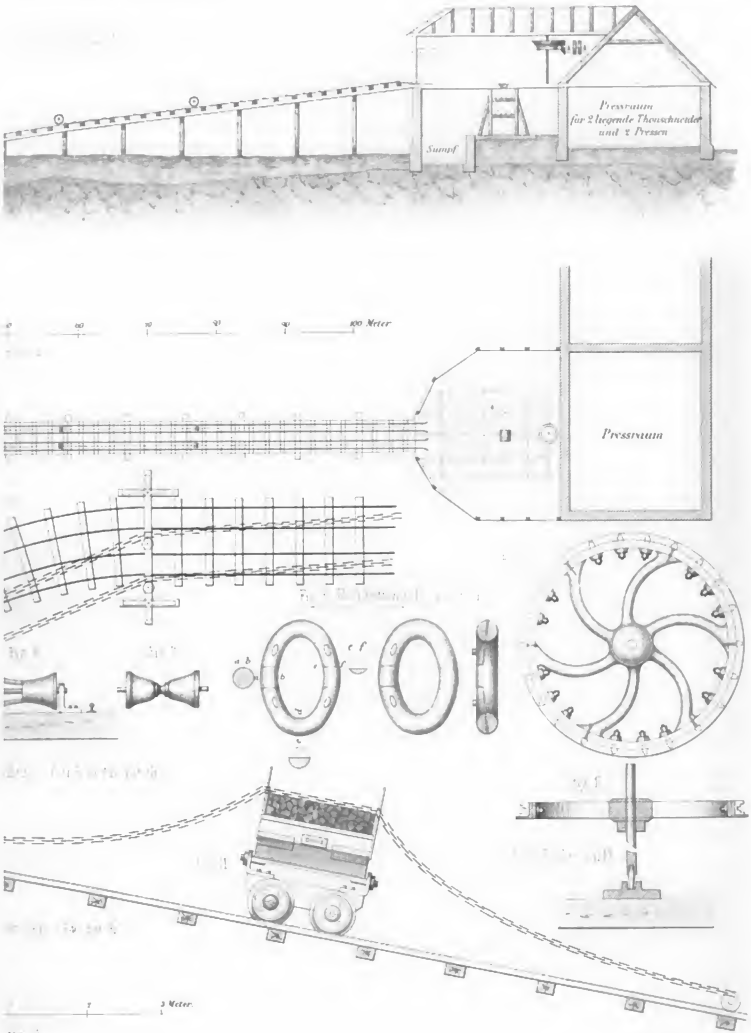

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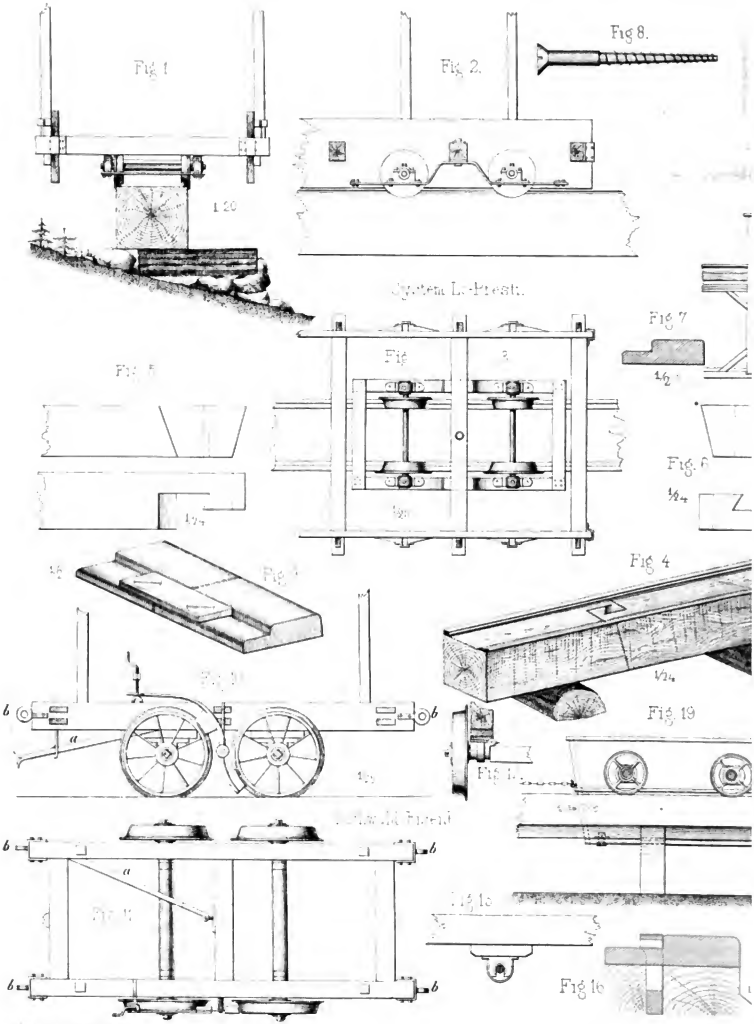

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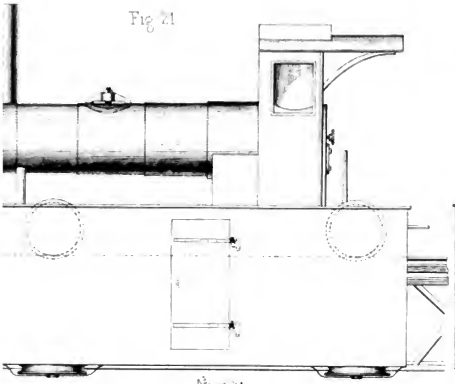
Fig. 21



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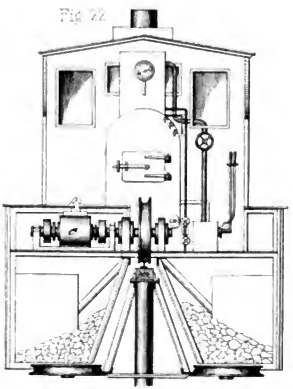


Le P. v. Stone's Einschienenbahn.

Fig. 23

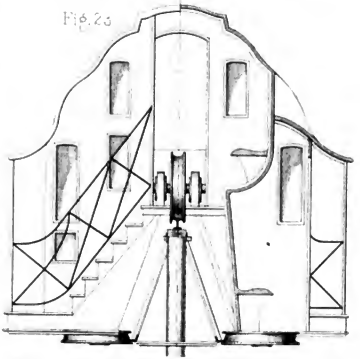


Fig. 24. Oberbau im Bodenwald

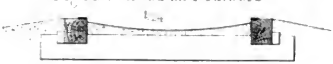
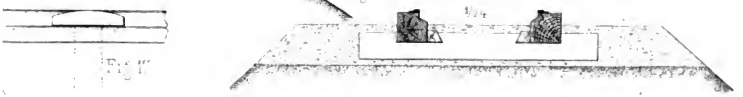


Fig. 25. Oberbau der Forst- u. Industrie-Bahnen.



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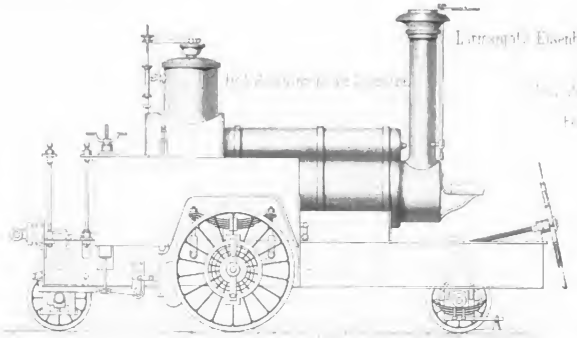

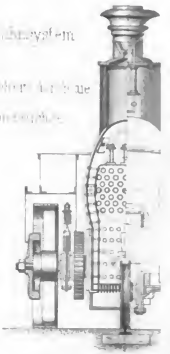

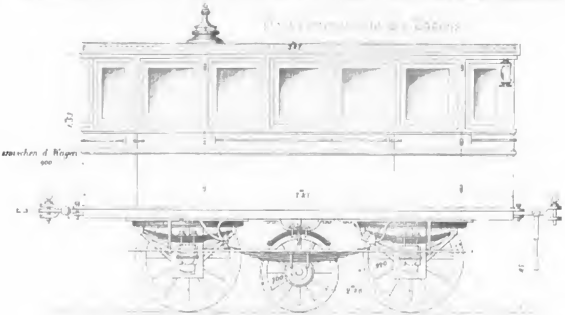

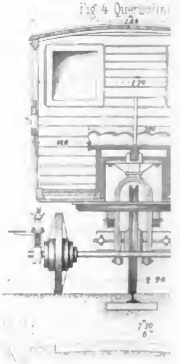

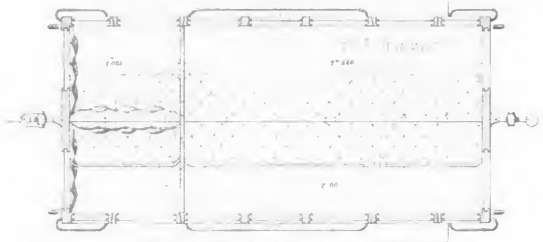

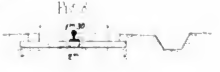

Lith. Anst. v. F. Wirtz Darmstadt

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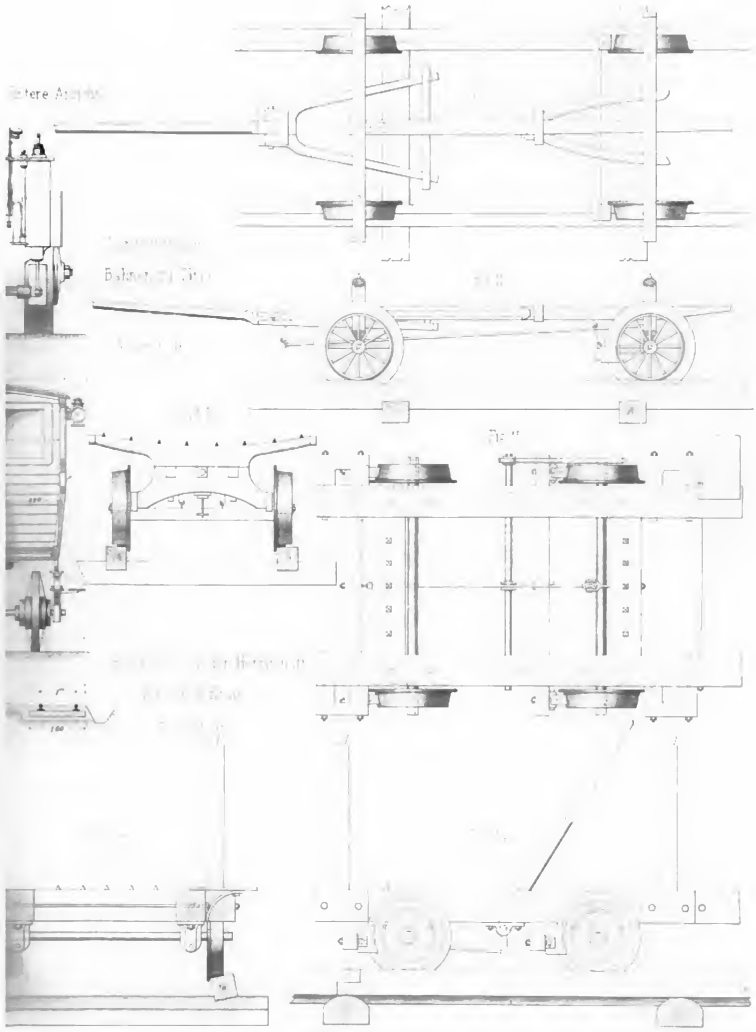

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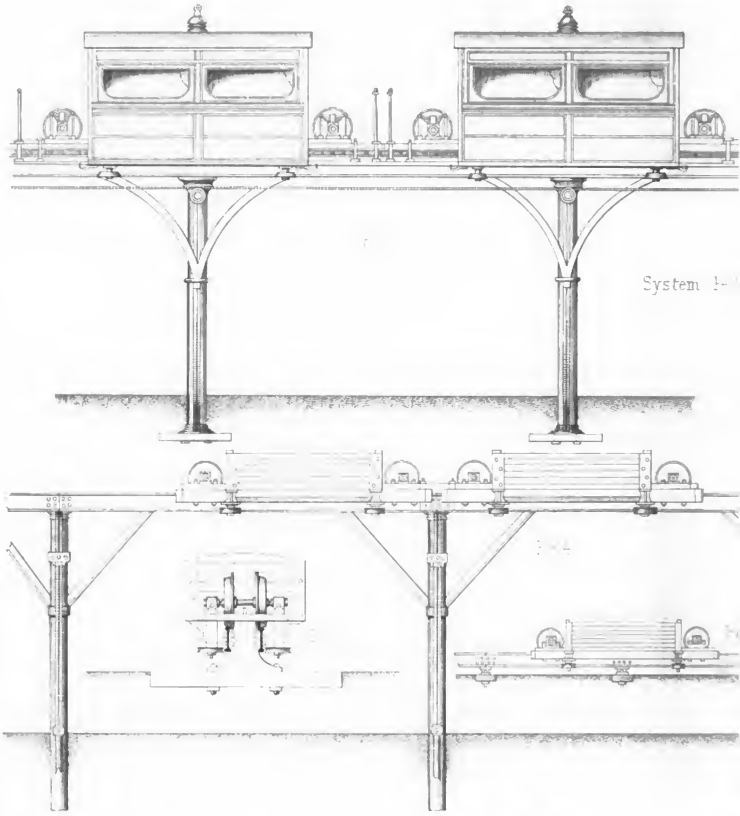
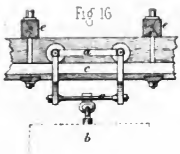


Salinenbahn zu Hall.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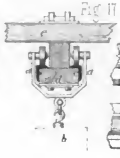
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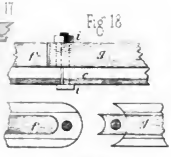
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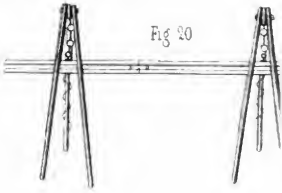
Fig 20

Fig 19

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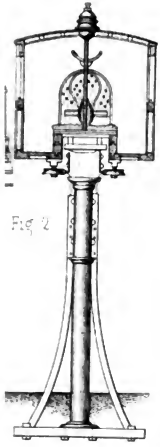
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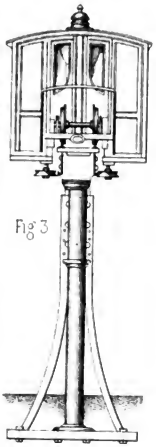
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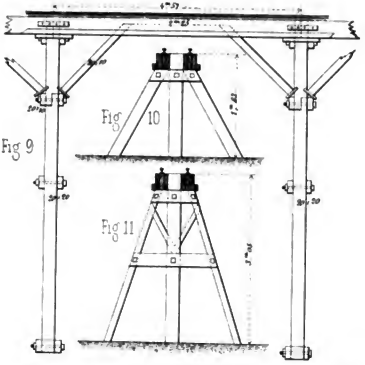
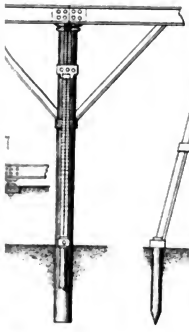


Fig 9

Fig 10

Fig 11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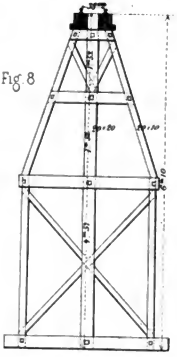


Fig 8

Frachtenträger von Liarsky

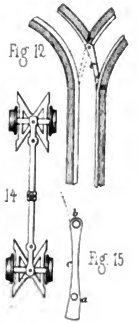


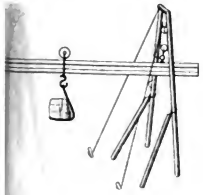
Fig 12

Fig 14

Fig 15

Salinenbahn zu Jschl

Fig 13.



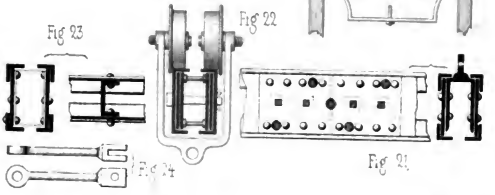


Fig 23

Fig 22

Fig 24

Fig 21

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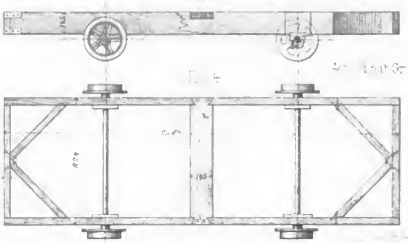
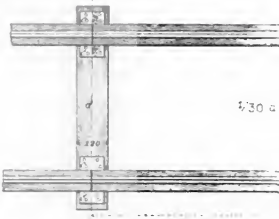
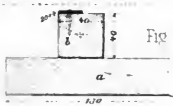
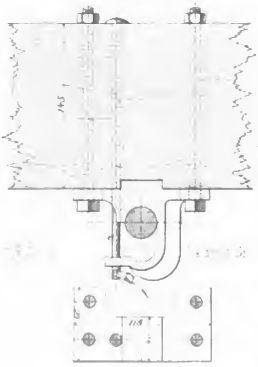
Fig. 7 Transportabeles Moorgleis









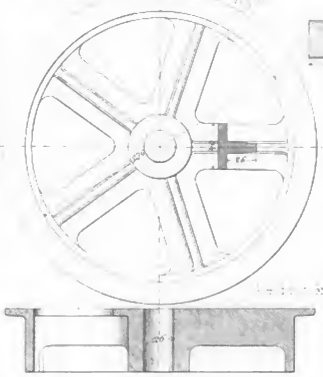
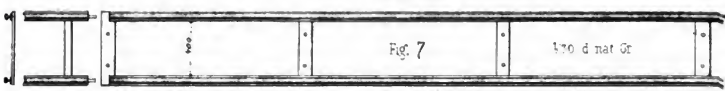


Fig 13

1/30 d nat Gr



Schmalspurige Feldbahn (System Cos

Fig 8

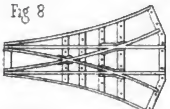
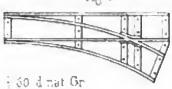


Fig 9



1/30 d nat Gr

Fig 10

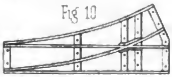
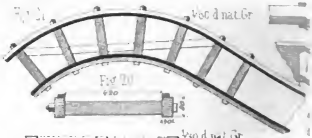
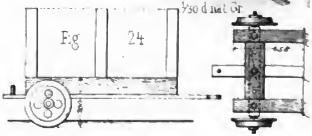


Fig 15

1/60 d nat Gr

Transportabele Hülfs-Bahn
(System Decauville)





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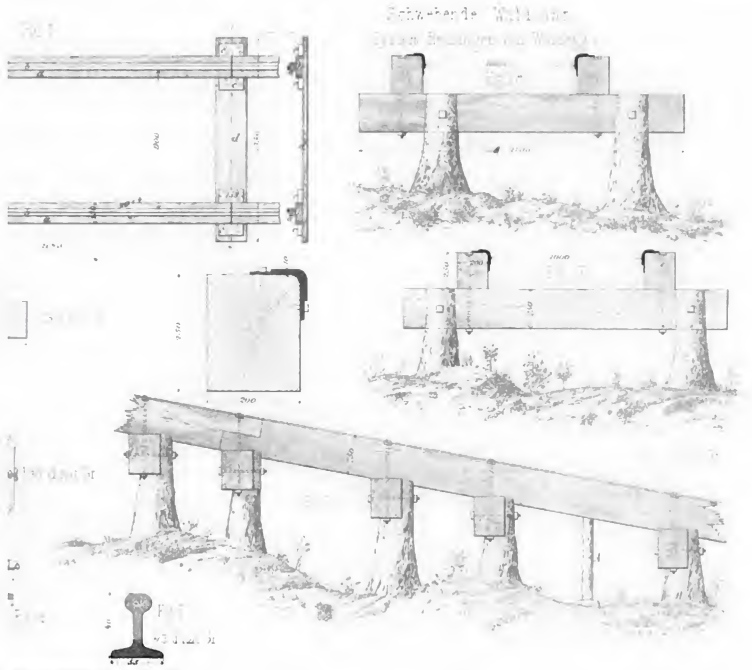

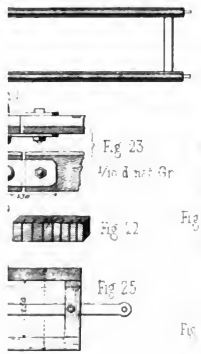

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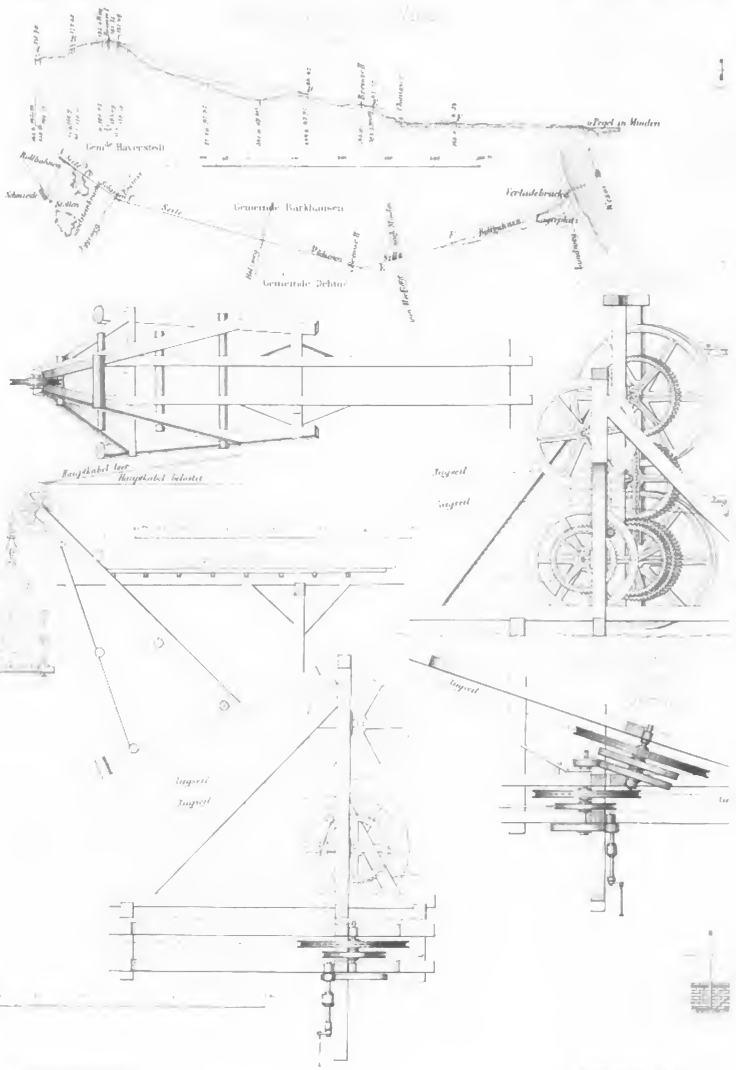

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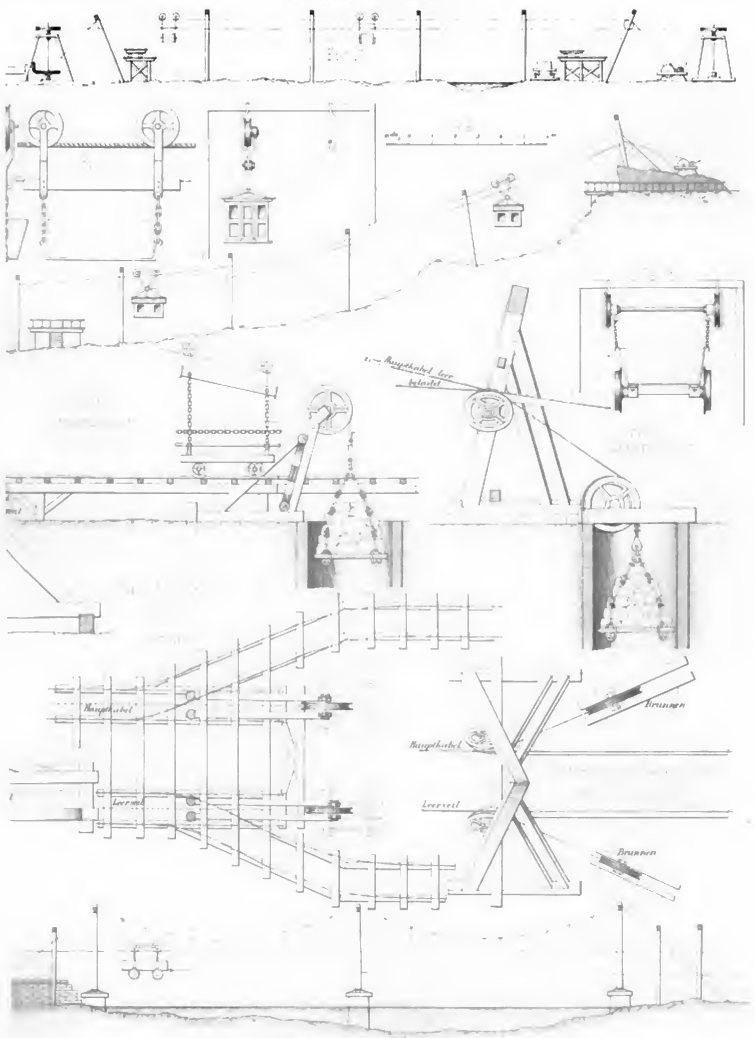

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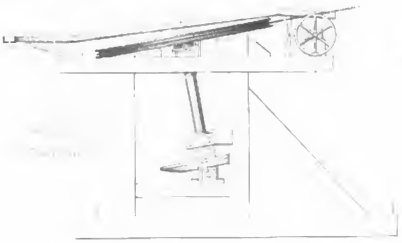
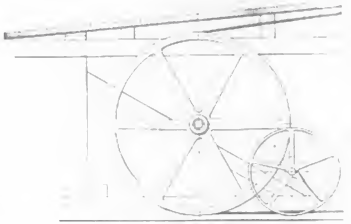
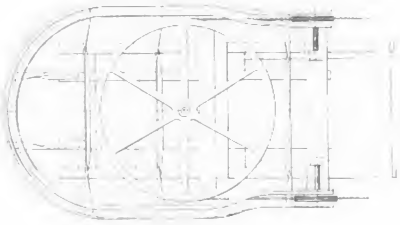
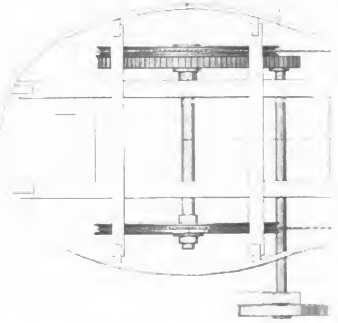
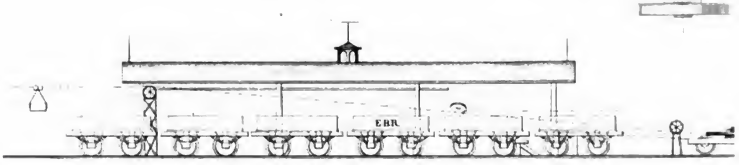


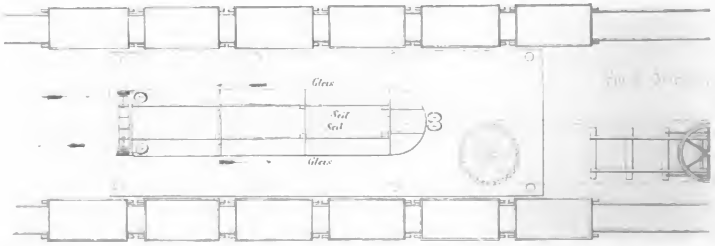








Entladevorrichtung einer Bergbahn.



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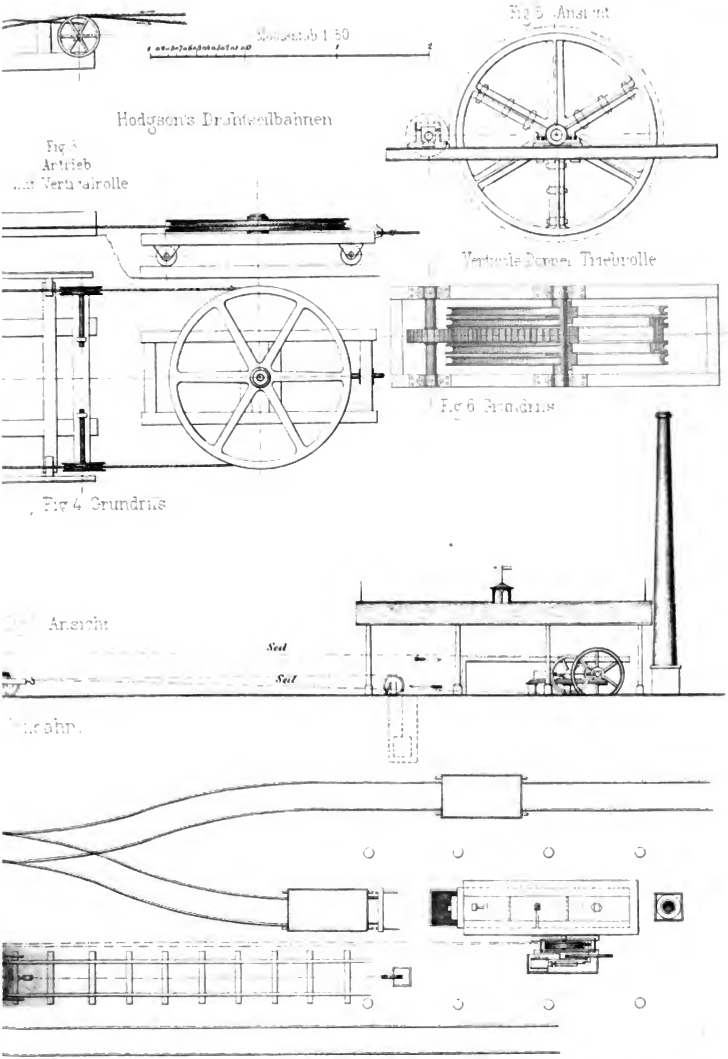

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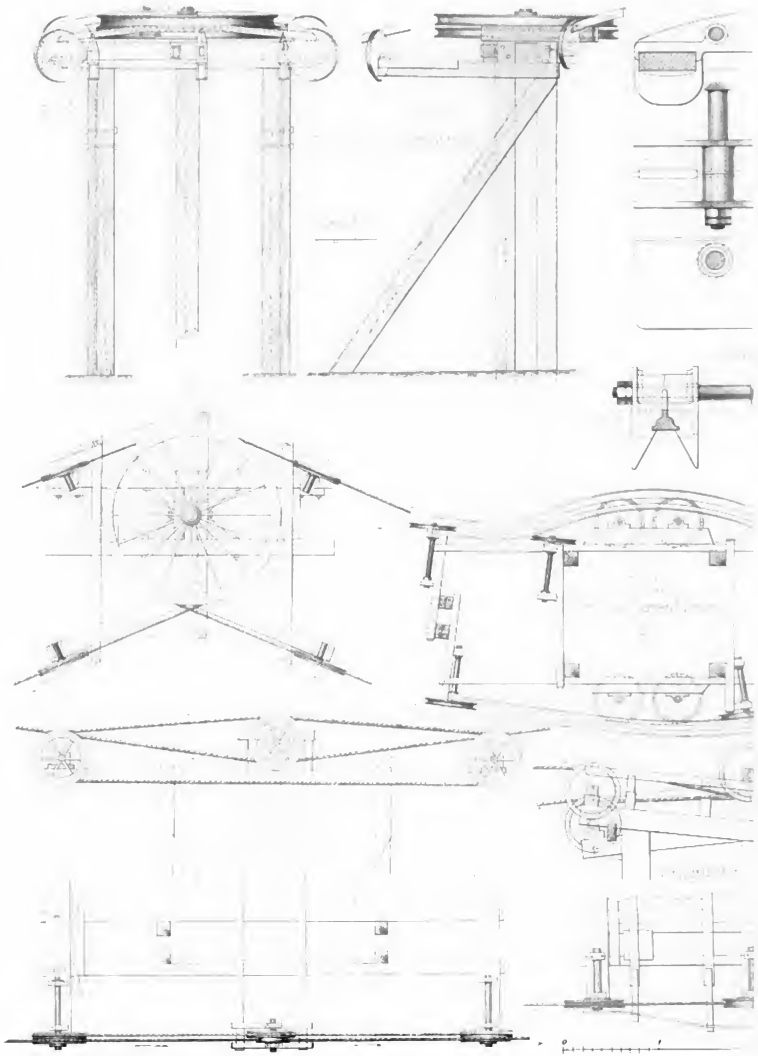

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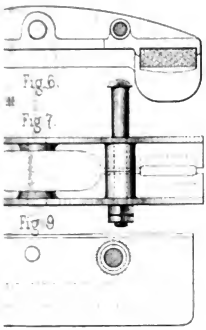
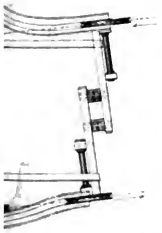
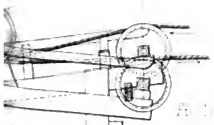


Fig. 7.

Fig. 9





sattel.

Fig. 10

Fig. 14

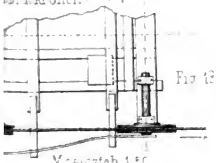


Fig. 15

Fig. 16

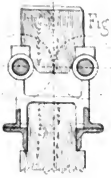
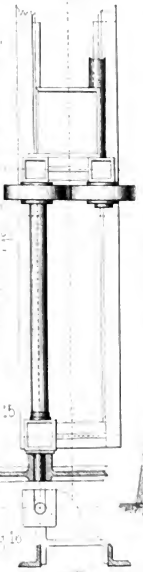


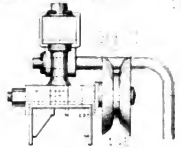
Fig. 17
Tragpfosten

Fig. 18
Tragpfosten

Fig. 19

Klemmensattel von Hodgson





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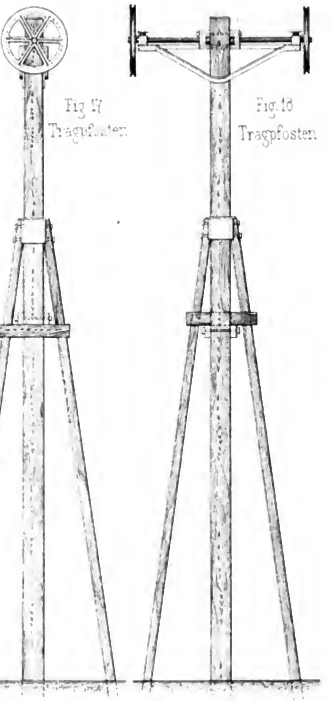


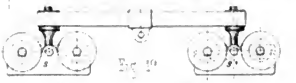


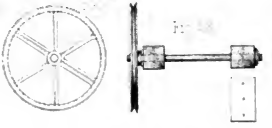
Fig. 21

Fig. 24

Tragrollen

Fig. 13

Masstab 1:50



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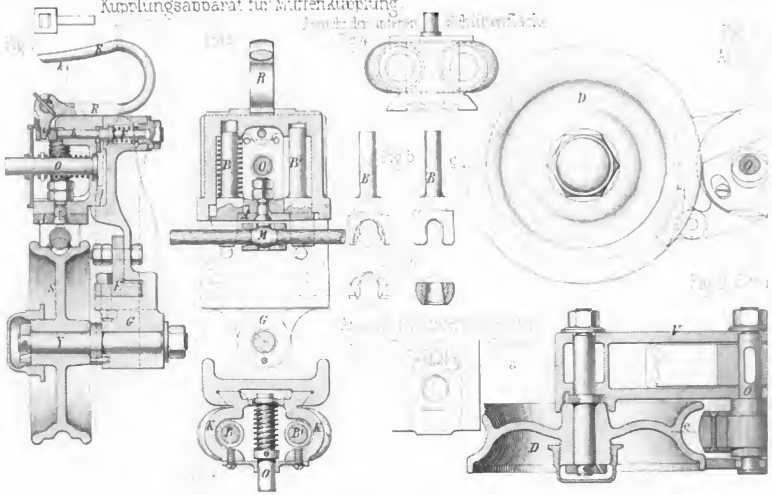
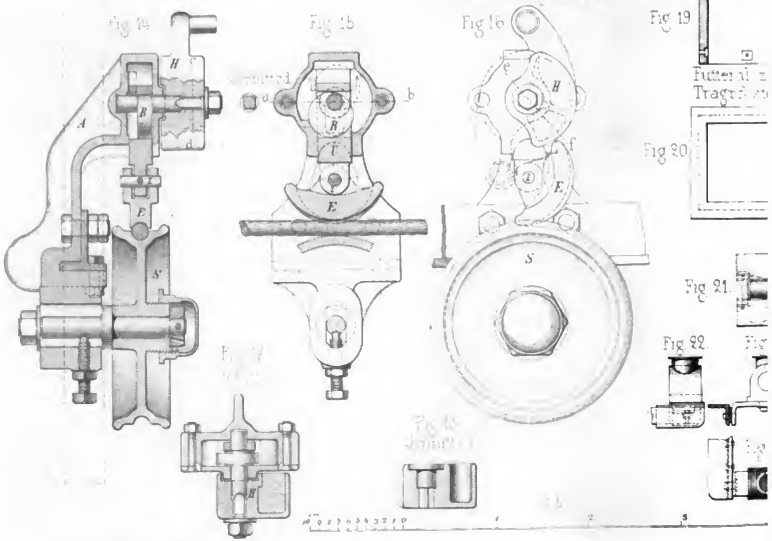
Kuppelungsapparat für Mitfenkuppelung.



Kuppelungsapparat mit Klemmexcenter



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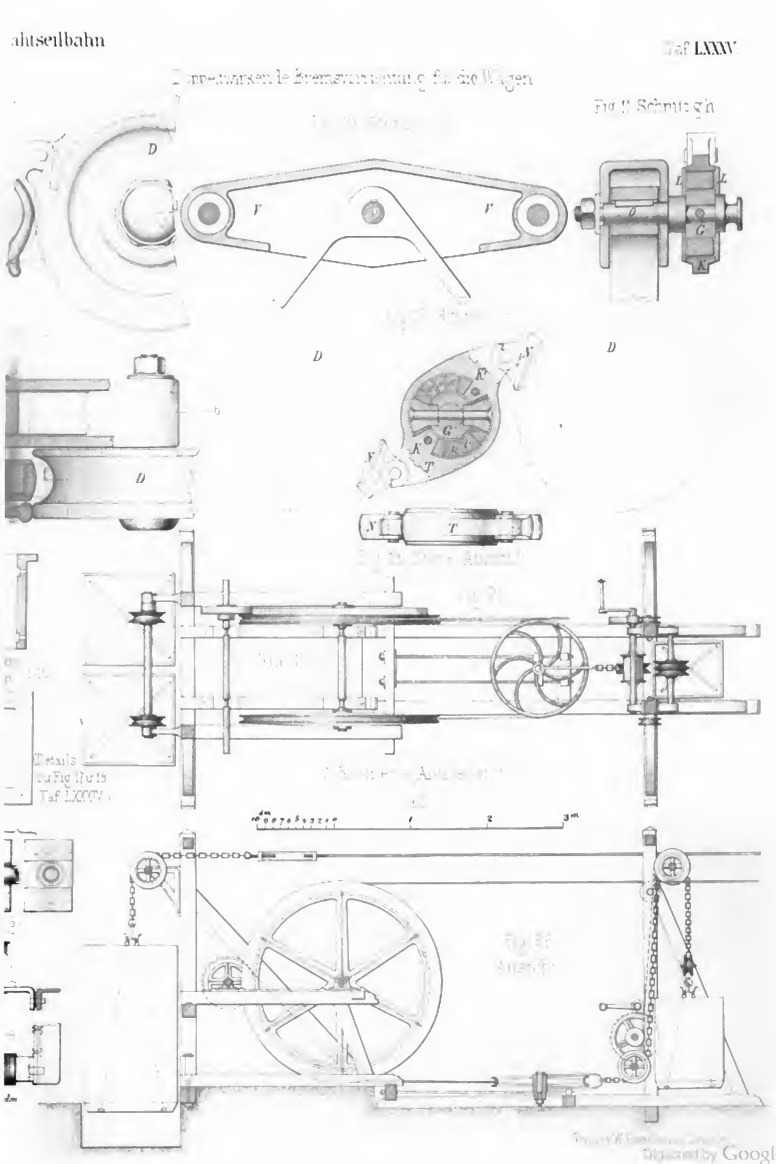
Doppelwirkende Bremsvorrichtung für die Wagen

Fig 17 Schnitt g h



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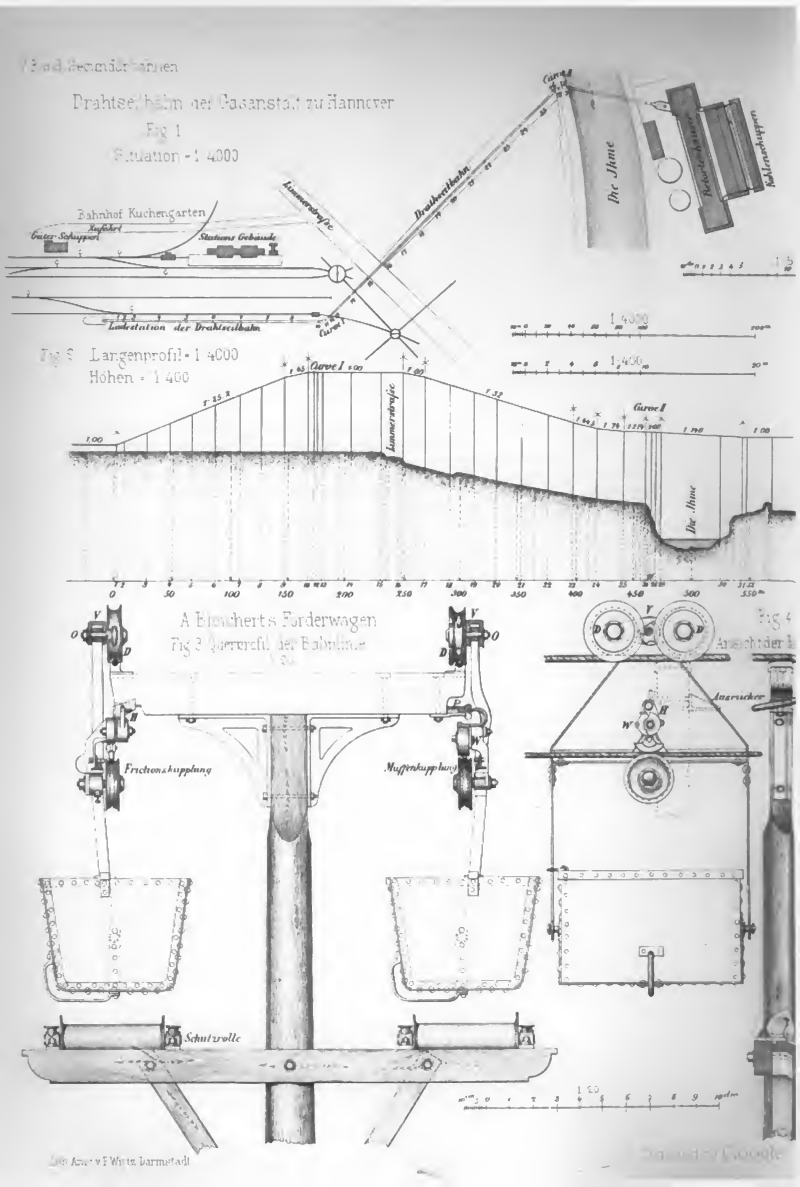
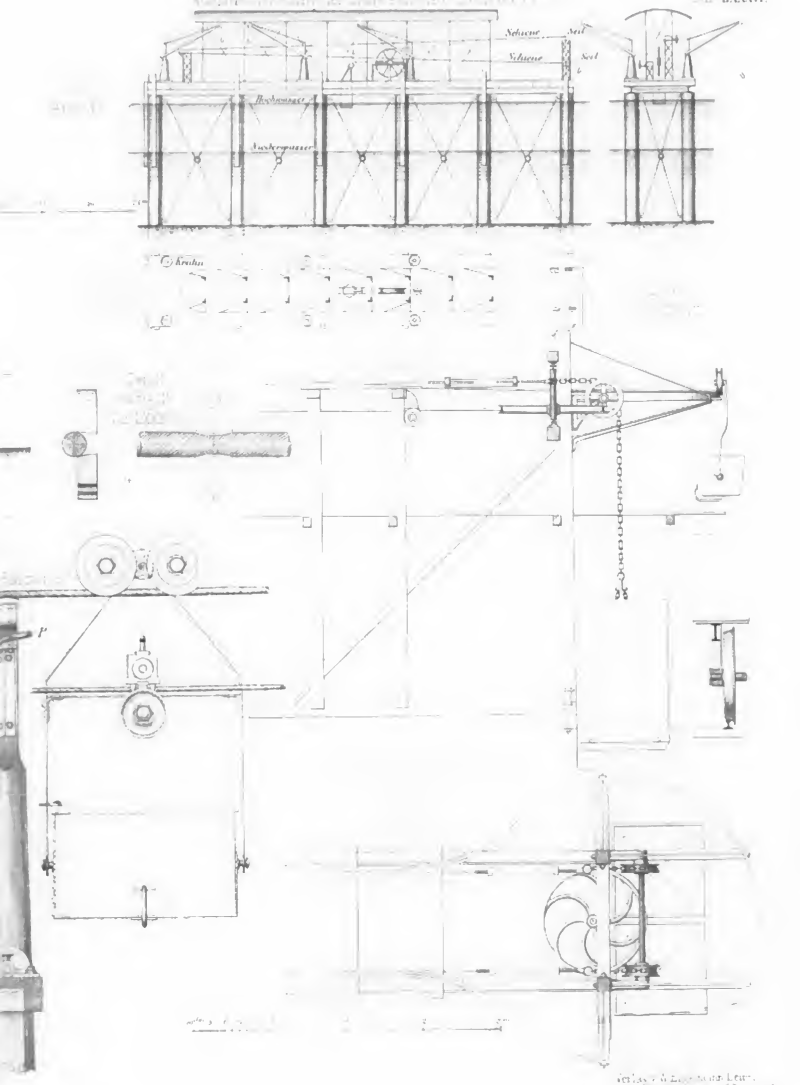

Drahtseilbahn der Gasanstalt zu Hannover
Fig 1
Situation = 1:4000
Bahnhof Kuchengarten
Gater-Schuppen
Stations Gebäude
Limmerstraße
Drahtseilbahn
Curve I
Curve II
Die Ihme
Kohlenschuppen
Ladestation der Drahtseilbahn
Fig 2 Langenprofil = 1:4000
Höhen = 1:400
Curve I
Limmerstraße
Curve II
Die Ihme
A Bleicherts Förderwagen
Fig 3 Querprofil der Bahnlinie
Frictionskupplung
Muffenkupplung
Ausrücker
Schutzrolle
Fig 4
Ansicht der
Digitized by Google



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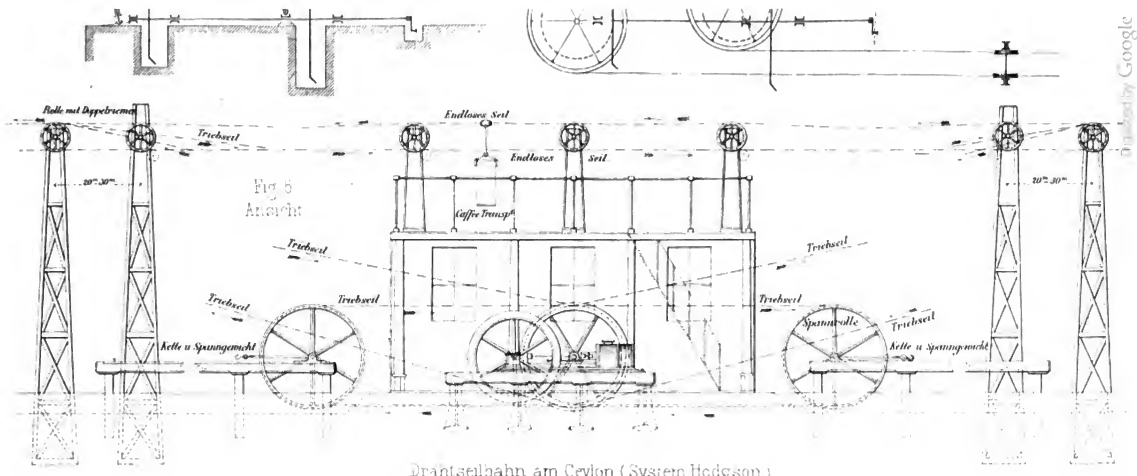

Fig. 8
Ansicht

Drahtseilbahn am Ceylon (System Hodgson.)

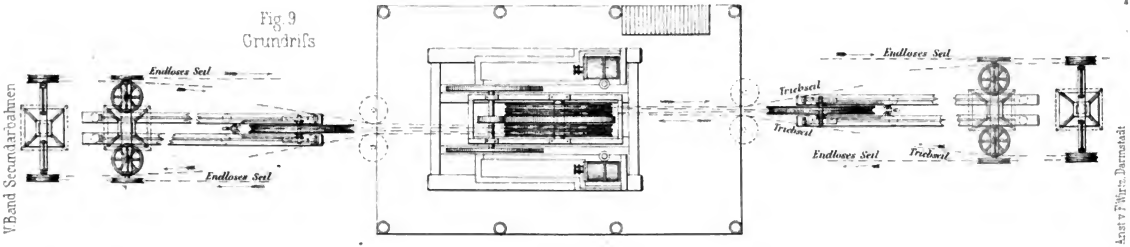

Fig. 9
Grundriss

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Seiltraject von Hermann Müller.

Fig. 1. Ansicht

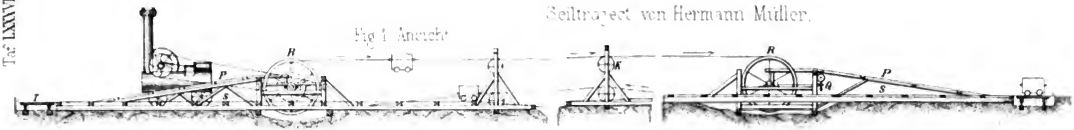
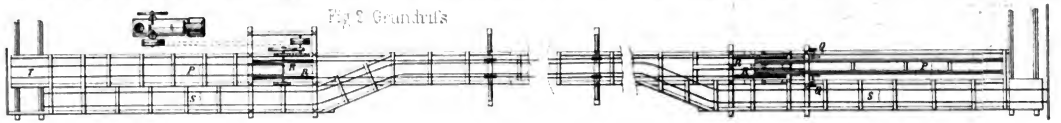


Fig. 2. Grundriss



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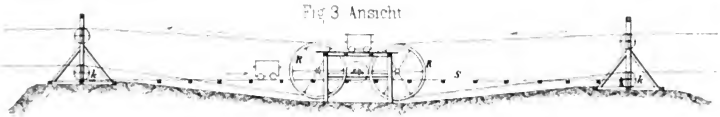

Fig. 4. Grundriss

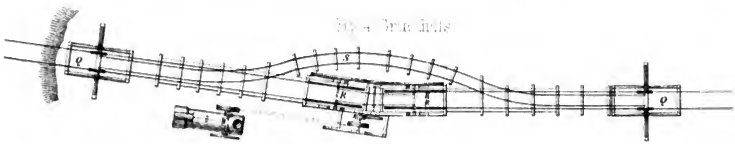

Fig. 7.

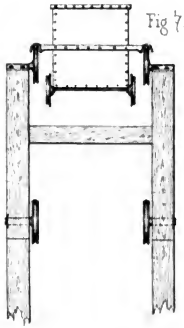

Fig. 5. Ansicht

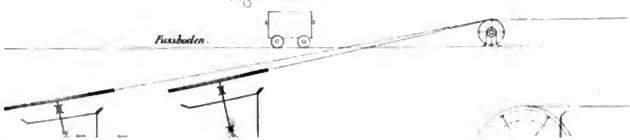

Fig. 6. Grundriss.

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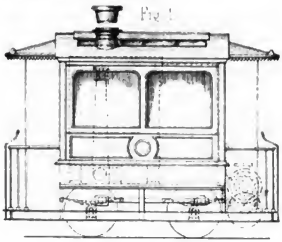
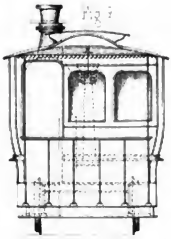
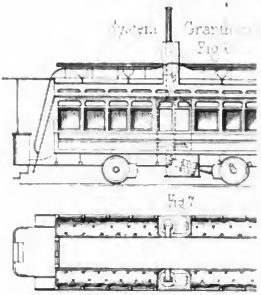


Fig. 3



System der Société métallurgique et charbonière belge à Tubize



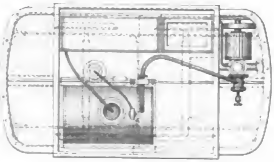
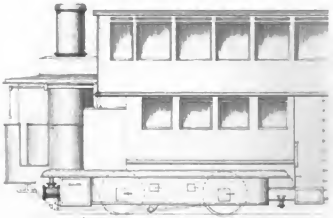
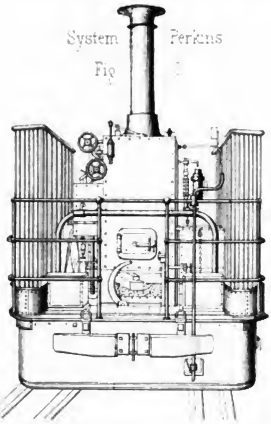


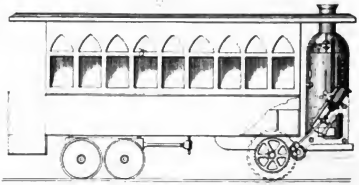
Fig. 4 System Lamm



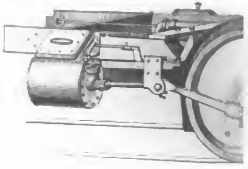
System Francis Trains (1860)
Fig. 11



System Perkins
Fig.



System der Baldwin Locomotivfabrik zu Philadelphia



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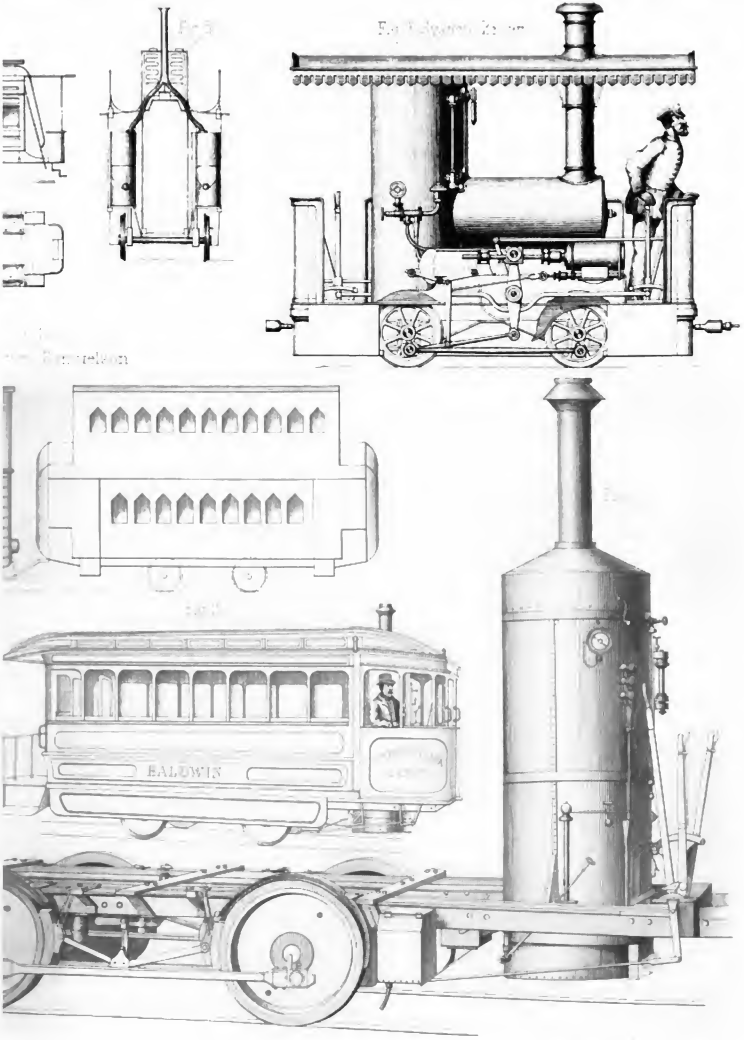

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System L. Schwartzkopff Berlin
1:45.

Fig. 1 Längenschnitt.

Fig. 2 Querschnitt

Fig. 3 Grundriss.

Fig. 4 Querschnitt

System Henschel & Sohn Cassel.
(System Merryweather)
Fig. 5

1:40

Fig. 6 Querschnitt

Lith. Anst. v. F. Wirtz, Darmstadt.

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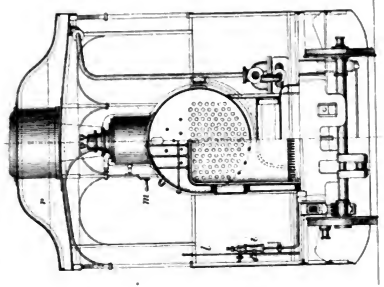

System Smith & Mygind
Fig. 8
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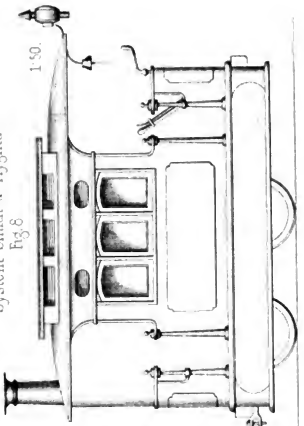


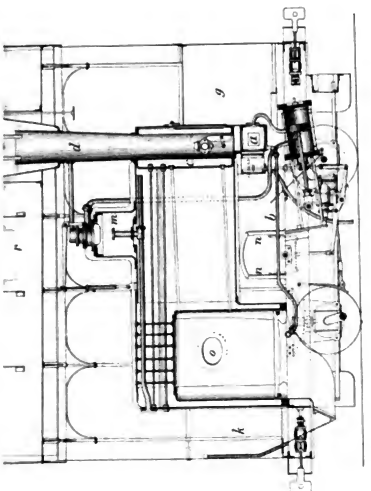
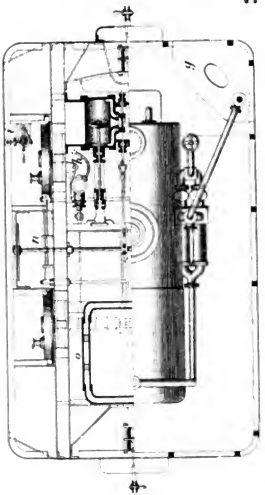


Fig. 7 Grundriss



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Erhöhte Strassenbahn

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Erhöhte Strassen

Neueste Projecte der New York Elevated Railroad

Fig 1

New Bowery

Fig 2

Third Avenue.

691

Fig 4

Fig 3

Lith. Anst. v. F. Wirtz, Darmstadt

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Fig 5

Ansicht neuftes Project der New York Elevated Railroad

Fig 6

Grundriss

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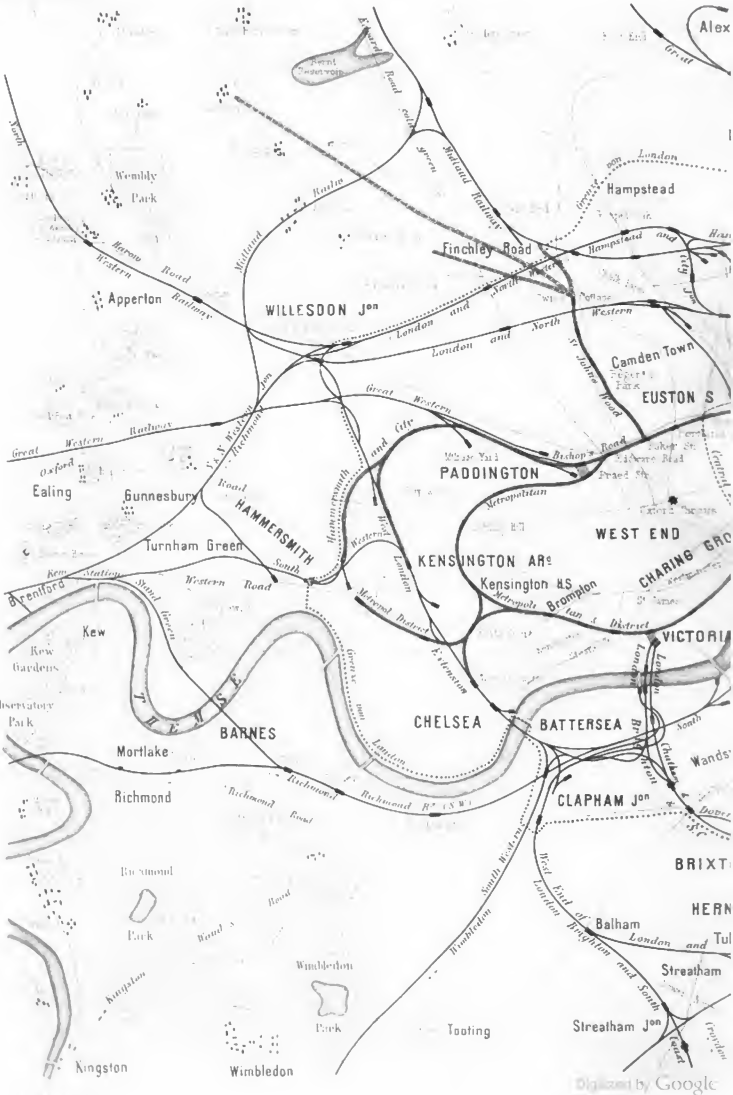
Alex
Great
Wembly Park
Harrow Road
Western Railway
Apperton
Midland Railway
Finchley Road
Hampstead
Hampstead and City Jon
WILLESDON Jon
London and North Western
Camden Town
St Johns Wood
EUSTON S
Great Western Railway
Oxford
Ealing
Gunnesbury
Road
HAMMERSMITH
Hammersmith and City
Bishop's Road
PADDINGTON
Metropolitan
WEST END
Turnham Green
Kew Station
Brentford
Stand Green
Western Road
South
KENSINGTON ARe
Kensington H.S
Brompton
Metropolitan & District
CHARING GRO
Kew
Kew Gardens
Observatory Park
THEMSE
Metropol District Extension
Greenwich Junction
CHELSEA
BATTERSEA
VICTORIA
BARNES
Mortlake
Richmond
Richmond Road
Richmond Rd (S.W.)
CLAPHAM Jon
Wandsw
Richmond Park
Wimbledon Park
Wimbledon
Kingston
Tooting
Balham
Streatham
Streatham Jon
Croydon
Kingston
Wimbledon
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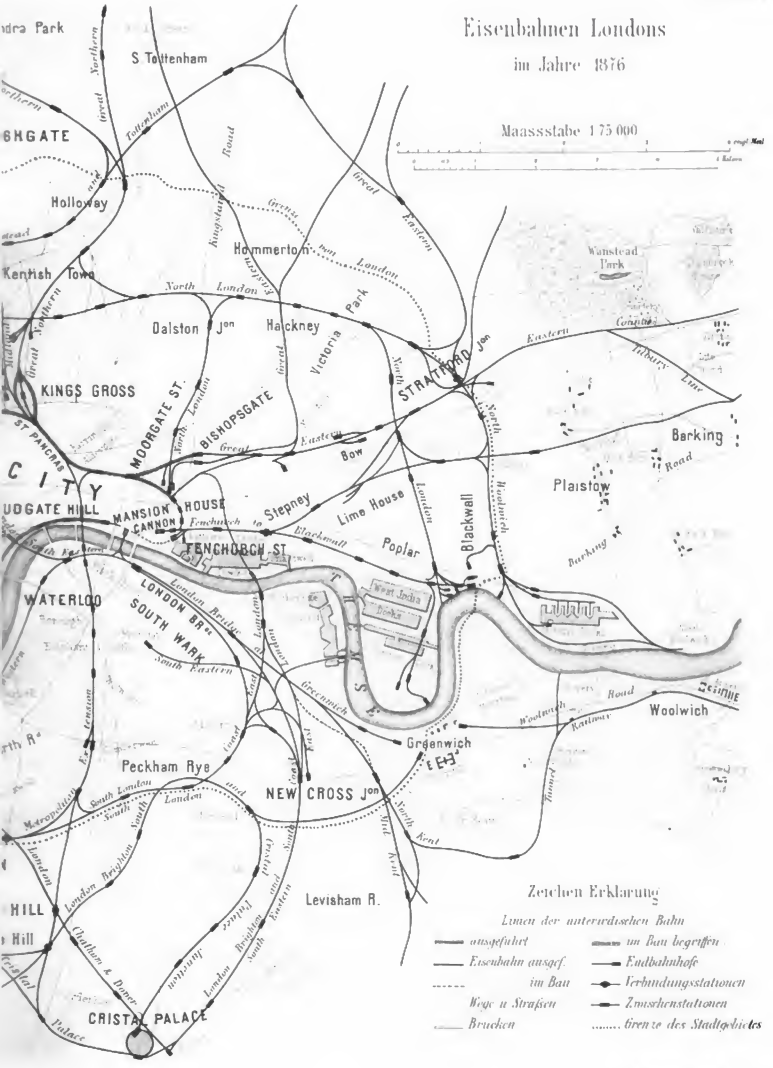
Eisenbahnen Londons

im Jahre 1876

Maassstabe 1:75 000



Zeichen Erklärung

Linien der unterirdischen Bahn

ausgeführt	im Bau begriffen
Eisenbahn ausgef.	Endbahnhöfe
im Bau	Verbindungsstationen
Wege u Strassen	Zwischenstationen
Brücken	Grenze des Stadtgebietes

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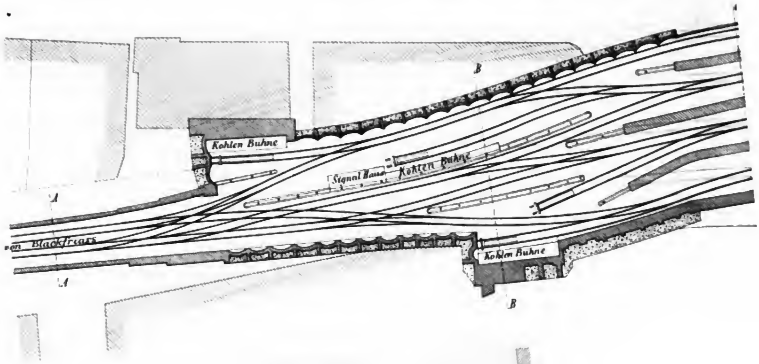
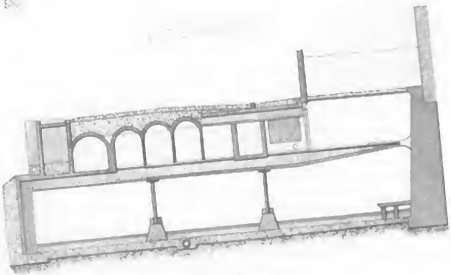
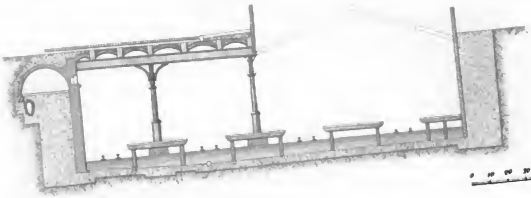
Station Mansion House der

Fig 1.







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a Vestibul
b Billet Verkauf
cc Buffet
d Restauration
e Stations Inspector
f Retiraden

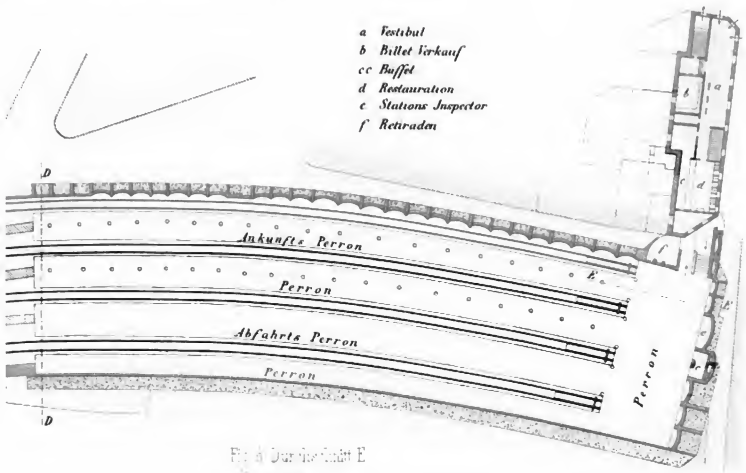


Fig. a Durchschnitt E

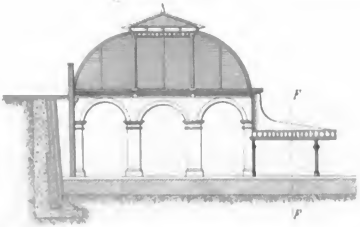
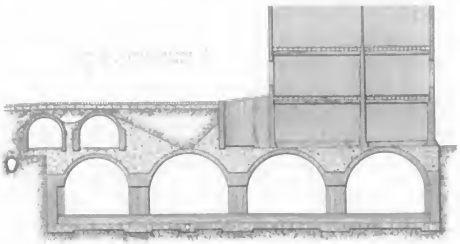
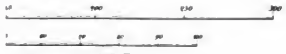


Fig. Durchschnitt F.

Durchschnitt A.





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Unterirdisc

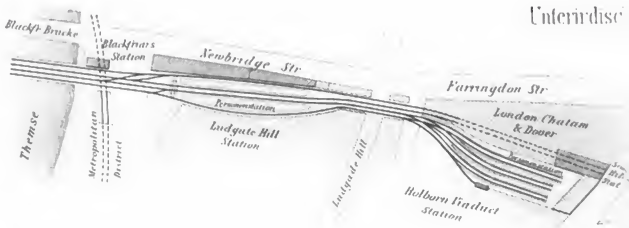


Fig. 4

Metropolitan Railway

Längenprofile

A. Unterexpeditionsgebäude der Great Western
B B Aufzüge für die Fleischhallen
C Rampe für das Strassenfuhrwerk
D D Wagen Reparatur Schuppen
E Rampe für das Strassenfuhrwerk
F Güterschuppen der Great Northern

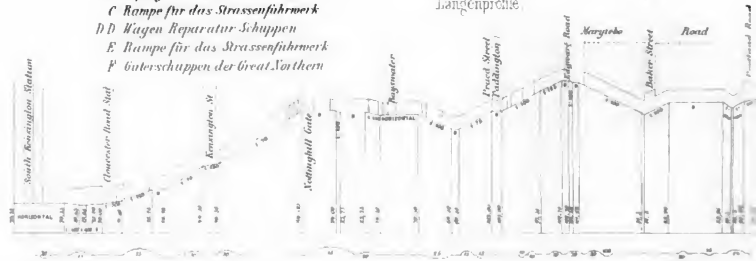


Fig. 5

Metropolitan u. St. Wood Railway

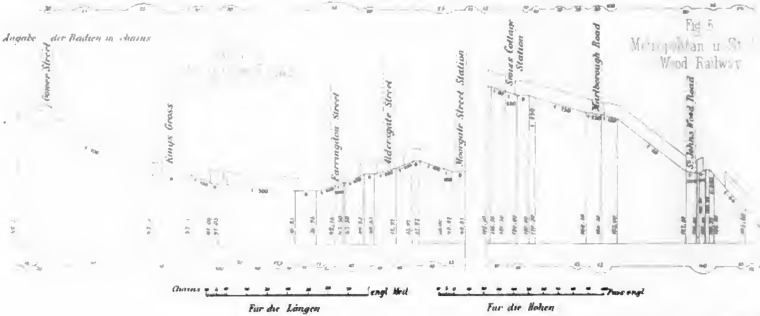
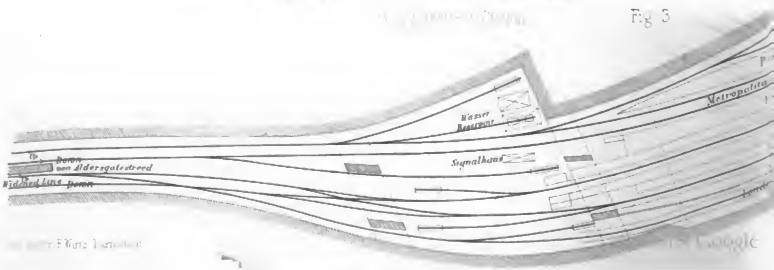


Fig. 3



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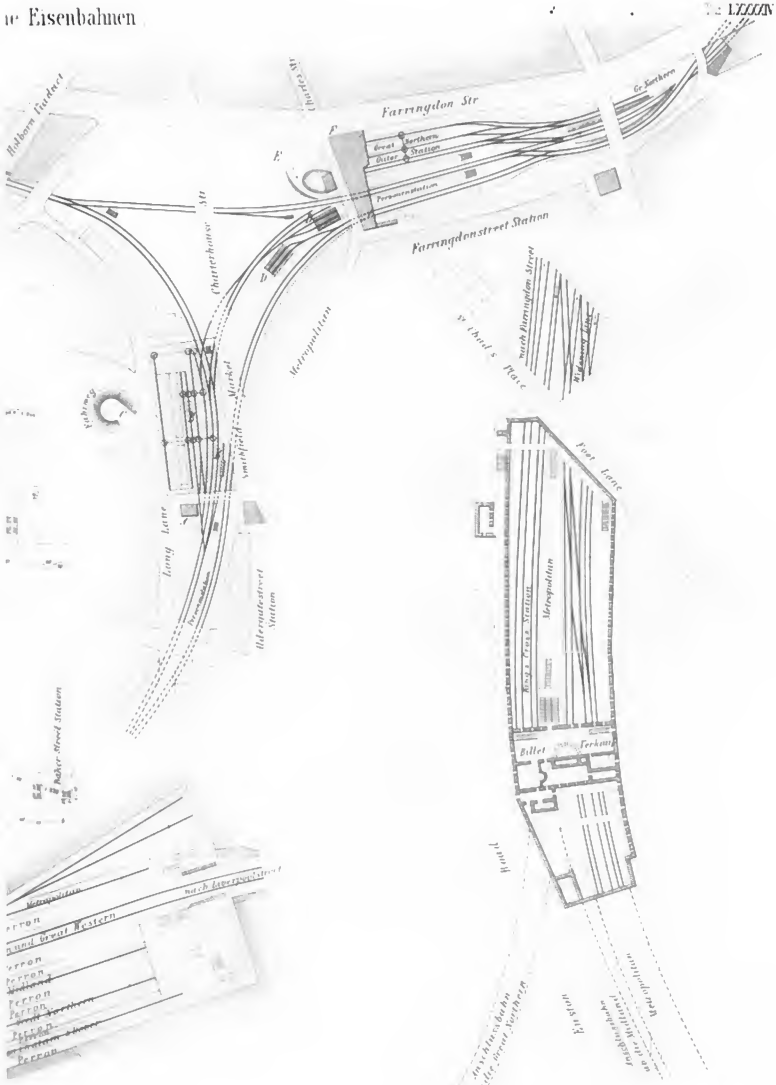

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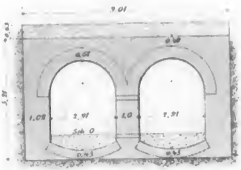
Fig. 1.



Querschnitt an der Shadwell-Station.

Fig. 8

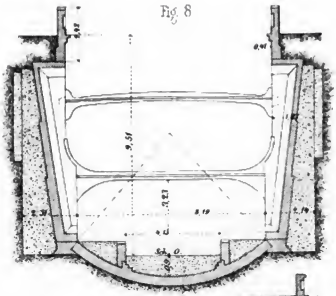


Fig. 2.

East London Eisenbahn

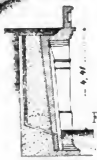


Fig. 9.

Fig. 3.

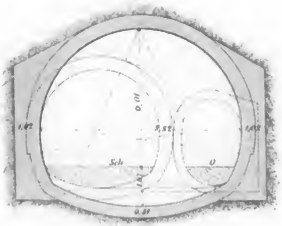


Fig. 4

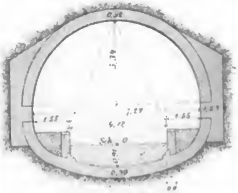


Fig. 10.

Fig. 5.

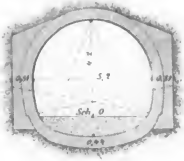
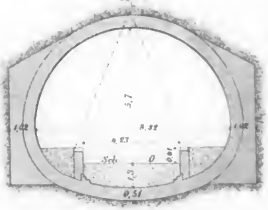


Fig. 6



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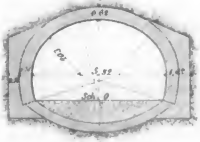

Fig. 11

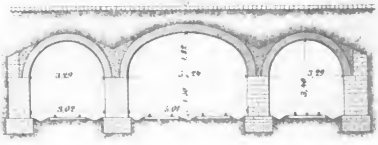

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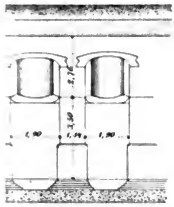
Fig. 11.



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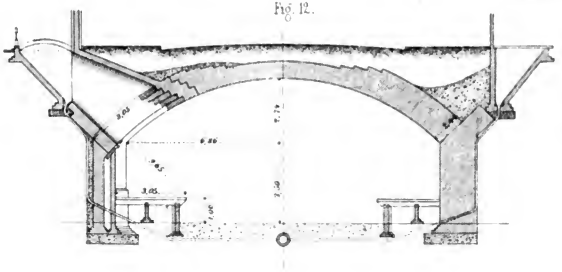
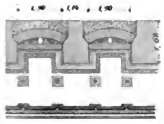


Station Gower-Street der Metropolitan in London

Fig. 13.



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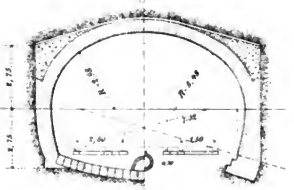

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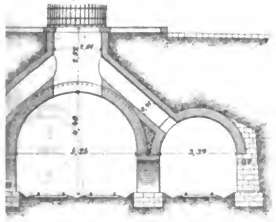
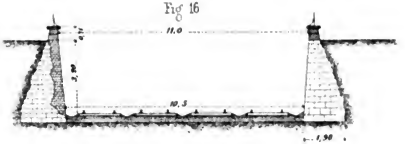
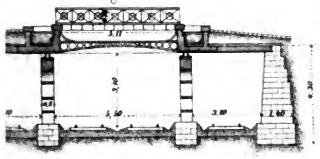


Fig. 16.



Unterirdische Städtebahn in New-York

Fig. 18.



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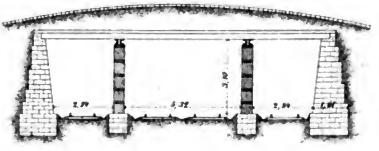

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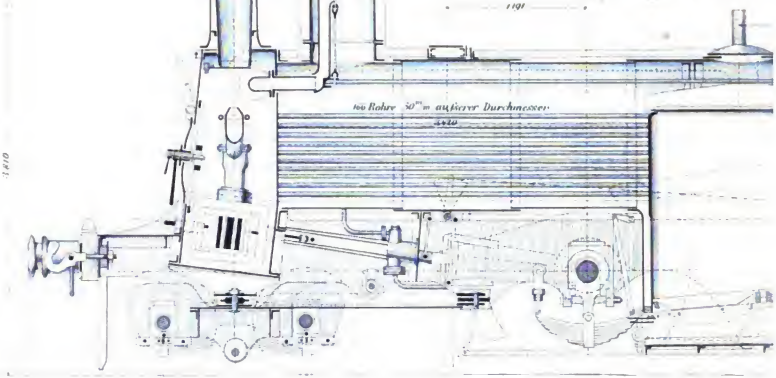
Metropolitanbahn zu Lon

Locomotive

Fig 1 Längenschnitt



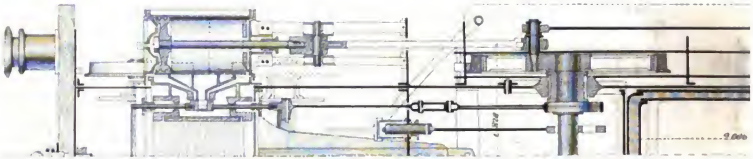


Fig 2 Grundriſs

Fig 3 Continuirl Bremse von Clark u Wilkin.

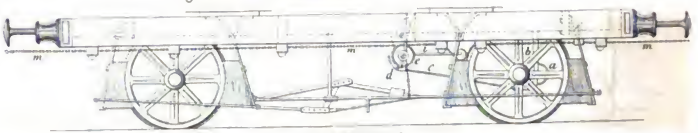
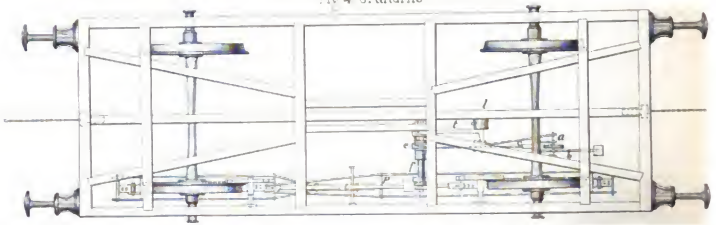


Fig 4 Grundriſs



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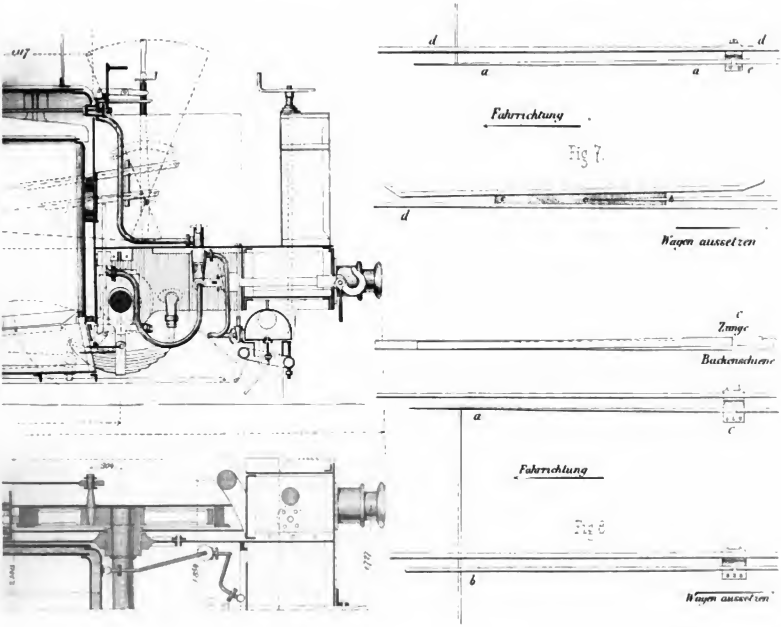
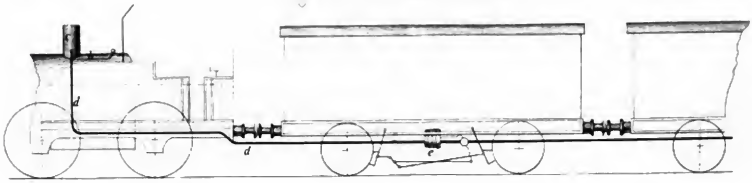
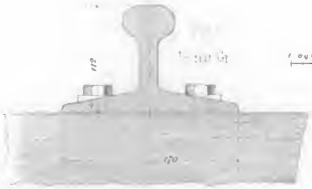


Fig 5 Smith's Vacuum-Bremse





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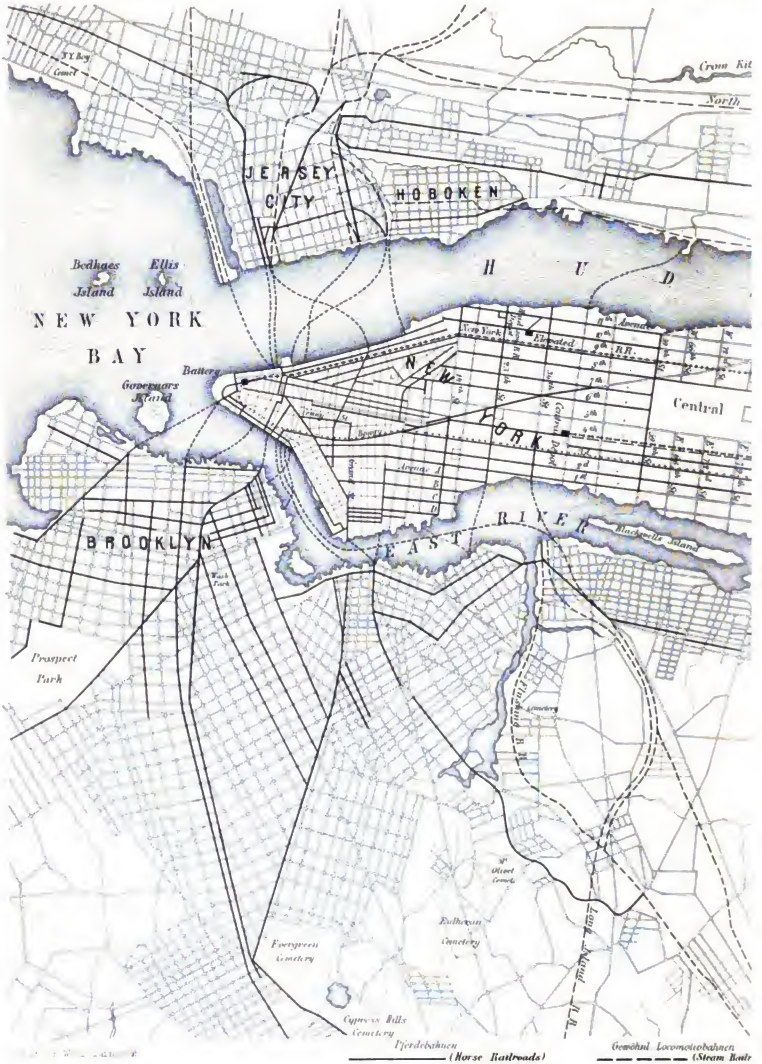
Plan von New-York



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Skizze der Station bei der 86 Strasse.

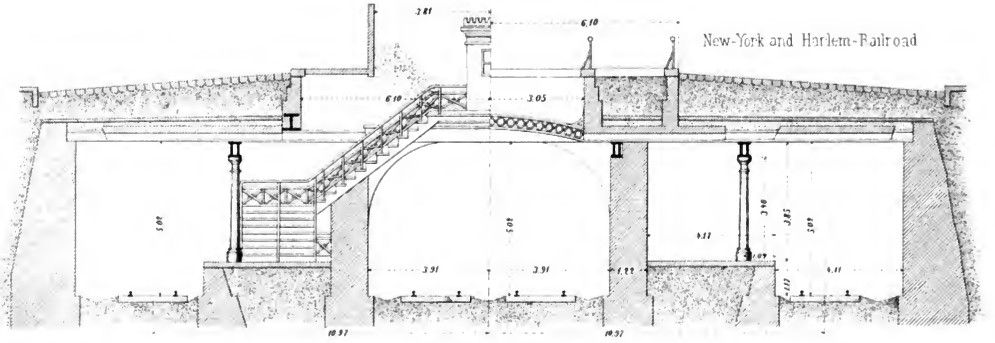

Fig 1. Querschnitt.

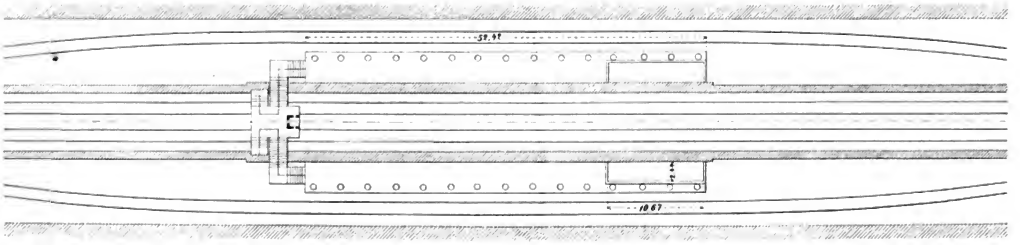

Fig 2. Grundriss.

Skizze der Stationen zwischen der 58 u 59 u

bei der 78 Strasse

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zu Fig 1 u 3.

Fig 3 Querschnitt

zu Fig 2 u 4

Fig 4 Grundriss

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Skizze der Station bei der 110 Strasse

Station der 4 Avenue

Fig. b.

New York and Harlem Railroad

Skizze der Station zwischen der 125 u. 126 Strasse

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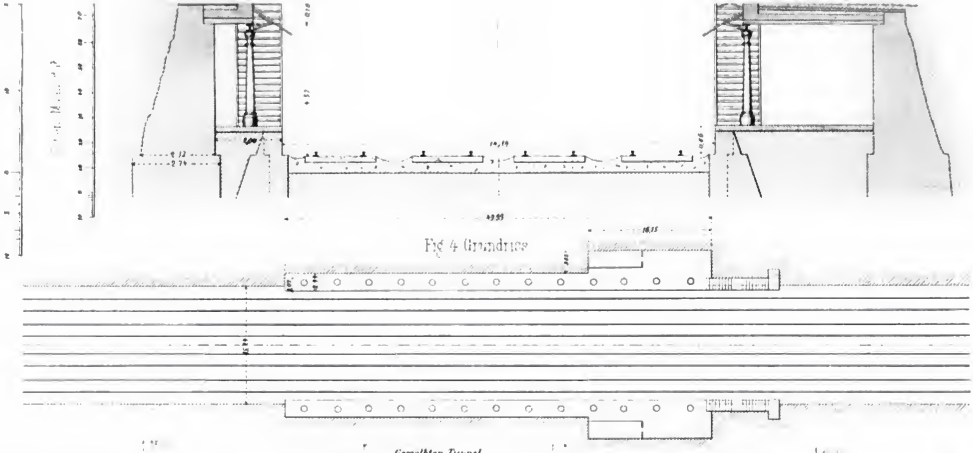
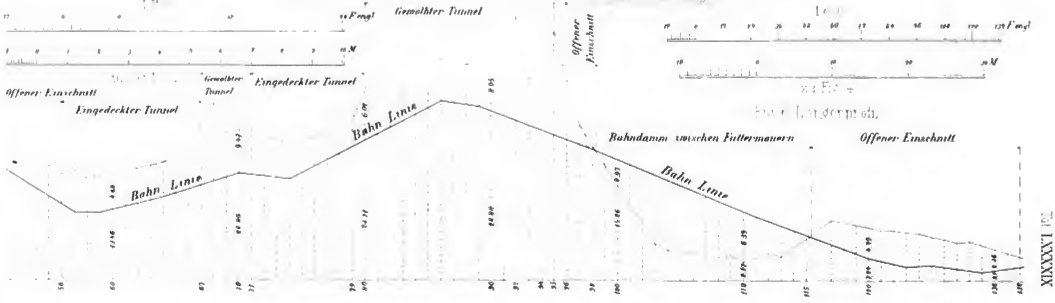


Fig 4 Grundriss



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